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ABSTRACT

The American Registry of Research and Research-Related Organizations in Education (ARROE) was compiled to identify those organizations engaged in efforts to improve educa+ion through research, development, dissemination, evaluation, and policy study activities. The organizations were con+racted between 1976 and 1978, and were selected because +hey had received contracts or grants for such research, they had published in an education journal, or they were public education agencies. Federal government agencies, however, were excluded from the survey. The organizations were classified according to three groups: (1) state, intermediate, and large local education agencies: (2) research units associated with a college, university, or junior college: or (3) other--including profit and nonprofit research and development organizations, hospitals, publishers, foundations, associations, and noneducational government agencies such as state health or manpower agencies. Of 6,346 organizations contacted, 81% responded. In addition to this report, a computerized file of the data collected and a printed directory resulted from this project. Data were analyzed by classification group, by insti+ution, and by organziation within an institution. (This report presents data on the following institutional characteristics: number, type, and locations: primary mission: funding: expenditures: staffing: and project activities. All survey questions are appended.) (Author/GDC)

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PERFORMERS OF RESEARCH AND RESEARCH-RELATED ACTIVITIES IN THE FIELD OF EDUCATION

A Report Prepared

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BUREAU OF SOCIAL SCIENCE RESEARCH, INC.
1990 M Street, N. W.
Washington, D.C. 20036

January, 1979

SUMMARY

Background And Methodology

Introduction

There are many hundreds of organizations in the United States engaged in efforts to improve education through research, development, dissemination, evaluation and policy study activities (RDD&E). However, prior to the effort described in this report, no single project had attempted to systematically identify these organizations and to gather descriptive information from them.

ARROE--the American Registry of Research and Research-Related Organizations in Education--represents an effort to correct this deficiency. Conducted from 1976 through 1978 by the Bureau of Social Science Research (BSSR) under sponsorship from the National Institute of Education (NIE), the project contacted over 6,000 organizations judged as likely to have conducted education RDD&E activities. They were identified as likely performers if they had received grants or contracts for such work, had published in an education journal, or were public education agencies. Federal government agencies were not included in the survey, however.

Data Collection Approach

For the purposes of the ARROE project, organizations were assigned to one of three groupings or "sectors:"

a. The public education sector, which included state and intermediate education agencies, and local education agencies whose enrollment is 10,000 or greater;

b. The academic sector, which included subdivisions of public and private two- and four-year colleges and universities; and

c. A residual sector which encompassed all other organizations, especially profit and nonprofit research and development organizations, but also hospitals, publishers, foundations, associations, and noneducational agencies of state and local governments, such as health and manpower agencies.

The basic data collection approach consisted of a mail survey, coupled with extensive telephone follow-up, which asked questions about staff characteristics, levels and sources of funding, areas of specialization, projects and other organizational characteristics. A total of 6,346 organizations were contacted, and 81 percent responded.

Products

The information provided by ARROE respondents was used to create three distinct products. The Registry of Research and Research-Related Organizations in Education is a comprehensive computer file containing data about organizations performing education RDD&E. It will be used by NIE both as a sampling frame for future general and special studies of the performer

universe and for special purpose and general mailing lists. The file is designed to permit its continual updating. Secondly, the Registry file has been formatted for generating a published Directory which will include key descriptors of each organization and will be suitable for general distribution. The third product prepared by BSSR is the present report which describes study procedures and presents aggregate data addressing a number of questions about the characteristics and activities of education RDD&E performers.

Eligibility Criteria

Each organization included in the report had conducted education RDD&E activities during its last completed fiscal year. In addition, organizations outside the public education sector were asked to meet two other criteria: (1) having a distinct organizational identity (e.g., a consistently used name and address); and (2) having appreciable autonomy from higher levels of authority in managing and carrying out education RDD&E work. If these criteria were met, such entities were treated as separate organizations even when they were divisions of a larger institution.

Analysis Plan

The information provided by organizations meeting ARROE's eligibility criteria was analyzed at three levels of detail:

1. The Sector Level--At this level the distribution of total expenditures, staff and projects according to the three sector groupings outlined earlier was determined.

2. The Institutional Level--Data provided by individual organizations within the same institution were aggregated, so that total distributions of money, staff and projects by institution were obtained.

3. The Organizational Level--Here, individual organizations making separate reports to ARROE and meeting ARROE's eligibility criteria were considered as the units of analysis. Because of the flexibility permitted respondents in choosing the "level" of organization to be described, the nature of these organizations varies tremendously. Some, for example, are entire public education agencies, colleges, or universities, but most are subdivisions of larger institutions. For technical reasons, much of the information gathered by ARROE could not be aggregated beyond this level. Therefore, the bulk of this report pertains to organizations.

Major Findings

Given that the intent of this study was to map the universe of RDD&E performers, the study findings are essentially descriptive in nature. Major findings are summarized here in the following general areas:

- Number, Type and Location of Organizations
- Primary Mission
- Funding Patterns
- Staffing Patterns
- Project and Related Activities

As noted above, most of ARROE's data are available at the organizational level. However, where appropriate, information for institutions and sectors is also reported.

Number, Type, And Location Of Organizations

Based on the information received from survey respondents, a total of 2,434 organizations were identified as being active education RDD&E performers. These organizations are located in 1,530 different institutions distributed as follows:

	Number of Organizations		Number of Institutions	
Public Education Sector	688	→	631	37 State Education Agencies (SEAs) 193 Intermediate Service Agencies (ISAs) 401 Local Education Agencies (LEAs)
Academic Sector	1,268	→	423	Colleges and Universities
All Others	478	→	476	Miscellanious Organizations
Total	2,434	→	1,530	

The organizations are dispersed throughout the United States but with large concentrations in:

New York	266	Organizations (11%)
California	237	Organizations (10%)
Ohio	139	Organizations (6%)
Illinois	108	Organizations (4%)
Texas	105	Organizations (4%)
Pennsylvania	101	Organizations (4%)
Washington, D.C.	95	Organizations (4%)
All Others	1,383	Organization (57%)
Total	2,434	Organizations (100%)

Primary Mission

Outside of the public education sector, most of the organizations performing education RDD&E work do not specialize in this field. Only 24 percent of the academic organizations, and 34 percent of all others are education RDD&E specialists.

Instruction is the primary mission of 55 percent of the academic organizations participating in education RDD&E. Nonacademic organizations performing this type of work cover a very wide spectrum. The largest categories are RDD&E groups not specialized to education research (12 percent of the "residual" sector), health care groups (11 percent of that sector), private schools (5 percent), and noninstructional agencies of state and local governments (5 percent).

Funding Patterns

Information on expenditures was received from three-quarters of the eligible organizations; these organizations spent a total of approximately $735 million on education RDD&E during their last fiscal year. (No attempt was made to weight up these figures for all organizations in the survey.) Expenditures were distributed across groups of performers as follows:

Public Education Sector	$118,988,000 (16%)
Academic Sector	$373,623,000(51%)
All Others	$242,273,000 (33%)
Total	$734,884,000 (100%)

When the data were aggregated at the institutional level, 163 institutions spending $1 million or more for education RDD&E were identified. These are distributed as follows:

9 State Education Agencies
6 Intermediate Service Agencies
7 Local Education Agencies
83 Colleges and Universities
58 Institutions of Other Types
163 Total

But small rather than large expenditures characterize the majority of the institutions. Thus:

- Over one-half (56%) of state education agencies spent less than $500,000 on education RDD&E activities, and nearly three-quarters (72%) spent less than $1,000,000.

- A majority (51%) of intermediate service agencies spent less than $50,000 and over 90 percent less than $500,000 on these activities.

- Nearly two-thirds (65%) of local education agencies spent less than $100,000 and over 90 percent less than $500,000 on education RDD&E work.

- Over one-half (55%) of the colleges and universities that perform education RDD&E work spent less than $250,000 on these activities, and over three-quarters (76%) spent less than $1,000,000.

The preponderance of low expenditure units is, of course, even more marked among the 2,434 performing organizations; over one-third of the organizations spent less than $50,000 and over one-half less than $100,000 for education RDD&E activities.

In view of this situation, it is not surprising that the bulk of expenditures are concentrated in relatively few organizations, with about the top 30 percent of organizations (in terms of expenditures) accounting for about 90 percent of the total amount. In fact, the 172 largest performers--each of which spent at least $1 million for this type of work--account for 68 percent of all expenditures, although they comprise only 7 percent of the universe. These organizations are distributed as follows:

Public Education Sector	22 Organizations (13%)
Academic Sector	92 Organizations (53%)
All Others	58 Organizations (34%)
Total	172 Organizations (100%)

The largest single funding source for organizations of all types--both large and small--is the Federal government. It supplied funds for 53 percent of all expenditures for which detail about source of funding is available. Academic and public education agencies absorb funds from a variety of other sources, but other organizations are heavily dependent upon Federal funds. This is especially true of organizations whose primary mission involves RDD&E not specialized to the field of education.

Public education organizations commonly apply a greater percentage of their RDD&E funds to the evaluation function than do academic organizations, or those of other types, where emphasis--in terms of expenditures--is placed on research. Organizations of all kinds commonly spend only a small proportion of their funds for dissemination activities.

Staffing Patterns

Since the majority of education RDD&E performing organizations spend less than $100,000 for education RDD&E activities, it is not surprising that, in most organizations, the number of staff assigned to this work is typically quite small. The total number of full-time professional staff with

primary responsibility for RDD&E work, and the median staff sizes for institutions and organizations in each sector were as follows:

	Full-Time Professionals Doing Education RDD&E Work		
	Total	Number in Median Institution[2]	Number in Median Organization[2]
Public Education Sector			
SEAs and Large LEAs[1]	1,454	SEAs 10	SEAs, Large LEAs 6
ISAs and Small LEAs[1]	1,917	ISAs 2 LEAs 1	ISAs, Small LEAs 1
Academic Sector	12,933	5	2
All Other Organizations	5,982	4	4
Total	22,286		

Staff size increases dramatically among organizations with education RDD&E expenditures of $1,000,000 or more. About 30 percent of all full-time professionals are employed in these larger organizations.

Functional emphases of staff appear to mirror spending patterns. Evaluators are most prevalent in public education agencies, while organizations elsewhere emphasize research in their staffing patterns. Dissemination is not a common staff specialty, just as it is not a function for which a large share of funds is spent.

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1. Large LEA--Local education agency with 50,000 or more average daily attendance. Small LEA--local education agency with 10,000-49,999 average daily attendance.

2. "Typical" institution or organization: the one occupying the median position when the data were arrayed.

Projects And Related Activities

Approximately 26,000 education RDD&E projects were conducted by organizations in all sectors during their most recently completed fiscal year. Project sizes are generally small, with 43 percent of the organizations reporting that their typical project size was $10,000 or less. However, outside public education and academic organizations, projects were larger. Over one-quarter of these other organizations reported typical project sizes in the $100,000+ range.

The topic areas toward which RDD&E projects are most commonly directed include program and project evaluation, basic skills, needs of special target groups, demographic analyses and vocational and teacher education. These areas reflect elements of current salience in education, such as the emphasis on providing students with certain minimal competencies and job-related skills, and concern with equity-related issues and with declining enrollments.

In conducting their projects and related activities, about one-half of the organizations participated in a consortium during their last fiscal year. This finding is of potentially great importance in view of the generally small size of the individual organizations.

Recommendations

On the basis of the project findings, ARROE staff made several recommendations for the conduct of future research in this area. These include:

- Additional analyses of the existing data by selecting homogeneous groups for study;
- Collection of new data for study of the large performers which are so dominant in the universe of organizations, as well as new data collection to determine the nature of consortia participation; and
- Careful consideration of the policy implications of ARROE's findings regarding the concentration of resources in a few organizations in all sectors, and regarding the relatively low level of RDD&E activity evident in the public education sector.

ACKNOWLEDGMENTS

The ARROE Project (American Registry of Research and Research-Related Organizations in Education) was funded by the National Institute of Education (NIE) under Contract Number 400-76-0123 and carried out by the Bureau of Social Science Research (BSSR) between July 1976 and December 1978.

Although every large-scale, complex research project is in essence a collaborative effort, the ARROE project more than others could be accomplished only because of the substantial contributions of many participants. Most important, we feel, was the role of the NIE project officer, Rolf Lehming, whose interest and substantive contributions went considerably beyond the usual monitoring function. Many of the ideas, concepts and techniques which underlie ARROE and the several products which are expected to flow from the project were his as well as ours.

Because of its size and diverse requirements, the study called for a variety of skills and talents from among the BSSR staff; only the major contributions can be acknowledged here. Chief credit for coordinating and integrating the efforts of many people and the myriad of steps in this complex project should go to Joanne Frankel. Her draft of the present report represented one of her many successful efforts to reduce to

manageable dimensions the elaborate intricacies of the ARROE project and the universe it set out to describe. The data collection and file storage system devised for this study is an ingenious one, which we hope will prove its utility for years to come, as the current data base is updated and enlarged through subsequent efforts. Rick Jones was responsible for developing and implementing the system, and deserves our deepest thanks, as do several others who worked with him in setting up the system, in particular Phil Wirtz and Jim Kretz. Throughout the life of the project, Elizabeth Stevens was responsible for a large number of tasks related to list building, data collection and data analysis requirements, and we wish to acknowledge her serious devotion to what at times must have seemed an unending and tedious task. Last but not least, we owe to Gloria Hamilton and Miriam Balutis of the BSSR field office the project's success in obtaining the cooperation of the thousands of organizations and individuals who were contacted in the course of this study.

We are also indebted to the members of the project advisory committees, whose contributions were helpful in clarifying the project objectives, alerting us to the many pitfalls which our effort was bound to encounter, and suggesting important improvements. We were also greatly helped in designing, pretesting and fielding questionnaires in public education agencies by the representatives of the Committee on Evaluation

and Information Systems (CEIS) who worked closely with us, particularly in the early phases of the project.

The names of advisory committee member, CEIS representatives, and BSSR project staff will be found in Appendix B of this report.

In order to accomplish this study, we needed and obtained the cooperation of several thousand organizations, who answered our telephone inquires and/or filled out the many often complex questionnaires and postcards which yielded the raw material for this study. We hope that they share our belief that it was a worthwhile undertaking, which will benefit research performers and the larger education community.

Biderman/Sharp

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I. OVERVIEW OF THE PROJECT

A. Background

- A school district administrator has written a Request for Proposals but has little inkling of which organizations should receive it.
- A Federal administrator wants RFPs to reach appropriate groups that may not have seen an announcement in the Commerce Business Daily.
- A university placement officer is concerned with finding employers for the education researchers it has trained.
- A Federal policy maker needs comprehensive data describing the education R&D community so that its health and development can be monitored.

At present, each of these individuals faces a significant problem: the lack of systematic information describing the universe of organizations that conduct education research, development, dissemination, and evaluation and policy study (RDD&E) activities. With the exception of certain well known groups, we do not know how to identify these organizations, and their particular skills and interests.

ARROE--the American Registry of Research and Research-Related Organizations in Education--represents an initial effort toward correcting this deficiency. It is the first systematic attempt to identify organizations (with the exception of Federal agencies) that conduct any activities pertinent to education RDD&E, and to gather basic descriptive information from them

about project activities, areas of specialization, funding, and personnel. This "first cut" is intended to provide a general picture of the universe, both in aggregated form and as a directory. We are hopeful that the file will have enough information to be useful for identifying and describing particular organizations, and to serve as a sampling frame for future special studies of selected groups of education RDD&E performers.

No single survey in the past has been as ambitious in scope, attempting to identify organizations across all sectors, education specialists and nonspecialists alike. Rather, prior efforts have tended to limit their focus to organizations of particular types (e.g., academic institutions, or public education agencies) whose primary activity is either education and/or R&D. Moreover, some sectors have received much more attention than others. For example, studies of state departments of education date back at least 40 years,[3] with surveys of research units completed in 1950,[4] 1955,[5]

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3. For a brief synopsis of studies of the research activities of state departments of education from the 1930's through 1970's see Daeschner, S. Role Orientation and Alienation of Directors of Research Units and the Organization of Research Units in State Departments of Education. Unpublished doctoral dissertation, University of Wisconsin, 1972.

4. Judy, C. The Trend Toward Research in State Departments of Education. The School Executive, November, 1950, 70, p. 47.

5. Phillips, B. Survey of Research Personnel, Facilities and Activities in State Departments of Education. Journal of Educational Research, September, 1957, p. 44.

1960,[6] 1969,[7] and 1973. [8] The most recent (1977) has been conducted by Mathis and Hoppe,[9] who contacted state education agencies in the United States and Canada and prepared a compendium of projects conducted by each.

Studies of research activities in public school districts also have a long history,[10] typified by a 1965 NEA survey of 102 public school district research offices,[11] and a 1969 study of the R&D activities of large school districts. [12] A current project in this sector is the U.C.L.A. Survey of Public School District Evaluation Units, which is combining a mail survey of directors of school district evaluation units with

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6. Morrison, J. The Role of State Education Departments in Research. Washington, D.C.: Government Printing Office, 1961.

7. Brickell, H. Survey of State Education Department Research, Development, Demonstration, Dissemination and Evaluation (RDDE), 1969. New York: Institute for Educational Development, 1971.

8. Educational Testing Service. State Educational Assessment Programs, State Testing Programs. Princeton, New Jersey: ETS, 1973.

9. Mathis, W. and Hoppe, M. A Compendium of Educational Research, Assessment and Evaluation Activities, United States and Canada. Trenton, New Jersey: New Jersey State Department of Education, 1977.

10. For a synopsis of these studies see Dziuban, C. Organization and Functions in Large City Research Bureaus. Unpublished doctoral dissertation, University of Wisconsin, 1970, Dissertation Abstracts, V.31A, p. 5695.

11. Reported in NIE. The Status of Education Research and Development in the United States: 1976 Data Book. Washington, D.C., Government Printing Office: 1976.

12. Mosher, E. What About the School Research Office? Berkeley, California: Far West Laboratory for Educational Research and Development, 1961.

intensive field studies to obtain information about unit activities, personnel, finances, impacts and needs.

Studies in the academic arena are exemplified by Sieber and Lazarsfeld's investigation,[13] completed in 1966, of education research activities conducted within graduate schools and departments of education and within 64 research units affiliated with these institutions. The study had a sociological focus, examining the organizational features of institutions which affect their research performance.

Another work is the 1977 study of knowledge production and utilization in academic institutions conducted by Clark and Guba. [14] Unlike the present study, however, Clark and Guba focused only on schools, colleges, and departments of education (SCDEs). They contacted a sample of 135 drawn from the 1,367 they had identified, and used existing documentation, questionnaires, and a limited number of site visits to gather information describing general characteristics, missions, organizational arrangements, activities, and projects. Interestingly, Clark and Guba underscore the need for the current project in describing the difficulty they encountered

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13. Sieber, S. and Lazarsfeld, P. The Organization of Educational Research in the United States. New York: Bureau of Applied Social Research, Columbia University, 1966. ED 010 276.

14. Clark, D. and Guba, E. A Study of Teacher Education Institutions as Innovators, Knowledge Producers, and Change Agencies: Final Report. NIE Project No. 4-0752. Bloomington, Indiana, Indiana University, 1977.

when compiling their listing of SCDEs. They note that "neither the Federal government, existing secondary sources (e.g., directories of higher education), nor formal organizations of teacher training agencies . . . had accumulated a single, comprehensive list. . . (p. I-11)."

The private sector has not received as much attention as the others, perhaps because the large-scale involvement of private organizations in education R&D activities is a relatively recent phenomenon. The most comprehensive summary descriptions of the contributions made by these groups are found in the Data Books published by the National Institute of Education,[15] and, earlier, by the National Center for Educational Research and Development. [16] However, these present summary data only, with individual descriptions limited to a few large organizations.

In addition to formal studies, a few directories of education R&D performers have been prepared. An early example is the directory prepared by Indiana University in 1944,[17]

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15. For example, see NIE 1976 Data Book: The Status of Education Research and Development in the United States. Washington, D.C.: Government Printing Office, 1976.

16. National Center for Educational Research and Development. Educational Research and Development in the United States. Washington, D.C.: Government Printing Office, 1970.

17. Smith, H. Directory of Educational Research Agencies in the United States. Bloomington, Indiana: Bureau of Cooperative Research and Field Service, 1944.

which listed the names and addresses of public education agencies, academic institutions, and associations with research units or directors. The two most comprehensive current directories are the Research Centers Directory[18] and the Directory of Organizations and Personnel in Educational Management. [19] The former, however, does not focus exclusively on education, describing 5,500 university and private nonprofit research units in a variety of subject area fields. (However, it does have a section labelled "Education".) The Educational Management Directory, on the other hand, lists only those organizations (approximately 1,100) active in the field of educational administration.

There are three other noteworthy sources of information related to that collected by the present study. These are the data bases compiled by the National Science Foundation (NSF), the National Center for Education Statistics (NCES) and the Interagency Panels on Early Childhood and Adolescence R&D. However, while valuable for their own purposes, these do not adequately present a picture of the universe of education RDD&E performers.

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18. Research Centers Directory, Sixth Edition. Detroit, Michigan: Gale Research Company, 1979.

19. Directory of Organizations and Personnel in Educational Management. Eugene, Oregon: ERIC Clearinghouse in Educational Management, bienially.

NSF collects data concerning R&D funding and personnel only for "macro" organizations (e.g., universities, industrial firms and state governments), but not at the level of organizational units specifically charged with the conduct of R&D (e.g., R&D centers of state education dissemination units). Moreover, education is separately identified only in the case of Federal funding. Further, when respondents are asked to classify research personnel by academic discipline, "education" is not included as a response option, but subsumed in the "other" category. Finally, data are not gathered concerning dissemination, evaluation and policy studies nor is information obtained for all sectors across the same time frame or even the same categories.

NCES data are similarly inadequate for describing education RDD&E organizations. Although NCES has the prime responsibility for collecting statistics from education agencies, its mission is focused on education programs as such, rather than on education R&D. Therefore, it collects only some data tangentially relevant to the present purpose, such as degrees, by field, of education practitioners.

The Interagency Panels, whose data bank is operated by the Social Research Group at George Washington University, collect information describing Federally funded projects in the areas of early childhood education and adolescence. However, because of their focus, data on the organizational characteristics of

performers are limited, and only organizations conducting Federally funded projects are included.

In summary, as this brief review indicates, past efforts were limited in scope or different in focus from the present study. Some sectors had been neglected, comparable information across sectors had not been gathered, and noneducation R&D specialists had often been excluded. Current sources have similar inadequacies. At the same time, largely as a function of Federal activities, research and related activities in the field of education have grown dramatically in recent years. [20] Therefore, the need for a comprehensive survey of all performers was pressing.

B. The Study Universe

Because ARROE attempted to conduct a census of organizations, a large and very diverse group was contacted. This group included state and intermediate education agencies, all local education agencies with a minimum of 10,000 average daily attendance, units of colleges and universities, profit and nonprofit R&D organizations; and other organizations which do not have as their primary mission either education or R&D, but which have conducted pertinent work. This latter group included some noneducation agencies of state and local government (e.g., departments of health), hospitals, foundations, and

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20. Mason, Ward S. and Carnot E. Nelson, Federal Funding of Educational R&D: R&D Education by Agency, Educational Researcher Vol. 7, No. 6, June 1978.

associations. With the exception of the public education agencies, all of the organizations included in the survey were selected because they had received one or more contracts or grants for pertinent work during FY 72-76, or because they were listed as the affiliation of an author writing in one of a group of education journals. Agencies of the Federal government were excluded from the survey.

As described in Chapter IV, for some of the survey respondents, education RDD&E is a marginal activity compared to their primary mission. The idea of limiting inclusion in the study to those organizations meeting a certain education RDD&E dollar volume or level of effort was entertained and then deliberately rejected so that the scope of the survey could be kept as broad as possible. To be eligible for inclusion, an organization simply had to have conducted some education RDD&E work during its most recently completed fiscal year. [21] Using this broad criterion allowed us to look at the tail of the distribution, seeing how much of the education RDD&E effort was accounted for by relatively small performers, who would have been excluded if stricter eligibility criteria had been applied.

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21. Questionnaires were accepted from respondents who had performed education RDD&E during their most recent fiscal year, and from those who had done such work earlier (FY 1972-76) and possessed capability and interest in this area at the time of the survey. However, only information from performers active during their most recently completed fiscal year is included in this report; organizations with earlier experience and active interest and capability are retained in the Registry and will be listed in the Directory (see p. 36).

Although the eligibility criteria are broad ones, it should be emphasized that there were omissions, some deliberate, others due to limits set by operational definitions, the feasibility of search procedures, and perhaps, the willingness of R&D performers to cooperate with the study. For example, R&D programs oriented exclusively towards military populations were excluded, as were those carried out by local school districts below our cut-off size (10,000 ADA). Organizations which perform RDD&E functions exclusively for meeting the training and personnel needs of for-profit industrial and service corporations also were excluded. [22] Additional performers also might have been identified had we directed our search through journals other than those specialized to education.

C. Data Collection Procedures

The basic data collection approach used consisted of a mail survey, which, in addition to identifying information, asked questions about each organization's staff resources, levels and sources of funding, areas of specialization, projects, and other organizational characteristics. The questionnaires were custom-designed for different types of organizations, in order to avoid

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22. To include this group would have raised difficult conceptual and design problems, and might have raised the complexity of the project to an unmanageable level. For example, we have no knowledge about the number of organized units performing personnel and development functions of the nature described. Further, the need to differentiate training and personnel development functions from education would have added additional complexity. Finally, there is reason to believe that, due to the proprietary nature of the work at issue, little if any of it may leave the organizations for whose needs it is designed.

asking clearly inapplicable questions, to keep questionnaires as brief as possible, and, generally, to facilitate questionnaire completion. Of particular concern--and the subject of elaborate design efforts (described in Chapter II)--was the problem of identifying appropriate autonomous units in academic institutions where the proliferation of institutes, centers, schools, and departments entailed risks of under-reporting as well as double-counting.

Several weeks after the mail instruments had been sent, telephone questionnaires were administered to recipients who had not responded by mail. The phone questionnaire contained a subset of the items in the mail instrument, selected because they elicited the key information of interest to NIE. As will be seen in Chapter III, the phone questionnaire turned out to be the primary means of data collection. Sixty-two percent of the respondents completing the questionnaire used the phone instrument, compared to 38 percent who completed the mail version.

In both the mail and phone instruments, provision was made for allowing respondents to designate information as "open" (to be published, together with the organizations's name, address, etc., in the forthcoming Directory), or "confidential" (to be reported here in aggregate, nonidentifiable form only).

In addition to administering the questionnaire by phone, the project also used extensive phone contact to clarify reasons for nonresponse, to motivate participation in the study, and to help respondents deal with items that created difficulty because the recipient could not furnish data in the manner we requested.

All data collection procedures and instruments were tested and revised during a formal pretest conducted during the spring of 1977. (Copies of the instruments appear in Appendix A.) The initial survey mailing took place during March 1978, with telephone contacts starting in April and continuing through July, 1978.

D. Project Advisory Committees

To help ensure that the study results would be useful, it was considered critical that members of the education RDD&E community be involved in planning the project and critiquing interim products. To that end, three separate project advisory committees were active throughout the study. The first, the Public Education Committee, was a source of advice on the organization of state, intermediate and local education agencies, and on appropriate techniques for data collection in that sector. The second group was the Education Researchers Committee, which provided experience and advice concerning conceptual and methodological problems, particularly among academic and private institutions. The committee also reviewed project definitions and helped formulate specific questionnaire items and instructions. The final advisory group was the

Education R&D Systems Committee. Its primary role was to afford advice on the use of the survey data from the perspective of the scientific study of research organizations and research systems management.

The names and affiliations of members of the three committees are presented in Appendix B.

E. Study Products

Three distinct products will be generated from this project. The American Registry of Research and Research-Related Organizations in Education is a comprehensive computer file containing data about organizations performing education RDD&E. It will be used by the National Institute of Education for future general and special studies of the performer universe, and for general or special purpose mailing lists. The Registry includes all information items on the questionnaires that responding organizations agreed to furnish as matters of record. It is set up as an open file, so that it can be continually updated.

Secondly, the Registry file has been formatted for generating a published Directory of the organizations. In addition to standard identifying information, the Directory has been planned to include key descriptors of each organization's education RDD&E personnel, funding, and activities. A sample Directory listing is shown in Figure I-1.

FIGURE 1-1

ARROE DIRECTORY LISTINGS

College or University Single Listing*

DOGWOOD COLLEGE — Nonprofit
Office of the Vice President
(Previous: Office of Rsrch Coordination)
201 Sherbourne Bldg.
University City, CS 11111
Dr. John Doe, Admin. V.P. — (222) 222-2222
Dr. James Loe, Asst. V.P. for Rsch Coord. — Est.: 1966

ED. RDD&E AIMS/ACTIVITIES: Coordinates research activities in educ. conducted by faculty of the college. Administers externally funded projs. Assists faculty in prep. of applications for grants and contracts.

SUMMARY FY 76:
Prin. Act: Educ, admin, planning, coord.

Ed. RDD&E: $900 K (of 2,200 K total R&D)
Major Fields: RDD&E: Man Develop.; Bus. and Econ.
ED: Econ of Ed; Prog. Eval; Occ. Outcomes

DISSEMINATION: Reports ($, Req.), Biblio (Req.)
Write to: Publications Division.

*A single listing for an academic institution may describe the entire institution, or, as appropriate, one of its RDD&E components. A component will be given a separate listing if information describing it is available, and it meets minimum size criteria.

The third study product is the present report, which presents aggregate data and addresses a number of questions about the characteristics and activities of performers which are of current interest to NIE and to other Federal and private policy makers with concerns in the field of education.

F. Study Questions

Our examination of the organizations that perform education RDD&E activities was guided by a number of question areas, including the following which were of special interest:

How many organizations conduct RDD&E activities related to education? What proportion of these are the large, well-known groups? To what extent do these large groups dominate the universe?

Do the organizations tend to specialize in education RDD&E? How much of the total effort is actually performed by specialists?

What are the major sources of funding for the organizations? To what levels of education, and to which RDD&E functions are funds applied?

What can be said about other important features of the system-- e.g., staff sizes, staff backgrounds, number of projects, typical project size and methods of dissemination?

Chapters III, IV and V of this report are detailed presentations of the findings related to these and similar questions. Preceding that presentation, however, we briefly describe in Chapter II some of the problems faced and procedures developed in carrying out this project. (A more complete description of problems and procedures has been prepared in the form of a work paper, available upon request.)

II. METHODOLOGY

When designing the ARROE study, there was every reason to believe that data collection would be difficult. The universe was an uncharted one, with relatively little known about the level and nature of efforts carried out by the many organizations and individuals who participate in the process. Because of the diversity of the groups involved, differences in the use of definitions, in organizational systems, and in the sophistication of information systems were anticipated. Four areas were seen as particularly difficult: (1) developing the list of organizations to be surveyed; (2) identifying appropriate performing units and respondents from the list; (3) developing definitions of research, development, dissemination, evaluation and policy studies (RDD&E); and (4) coping with the reluctance of some organizations--particularly in the private sector--to release the information requested for inclusion in the Registry and published Directory.

This chapter briefly describes the kinds of problems encountered in each of these areas, and the procedures developed to overcome them. General data collection procedures and the schedule used for data collection are also presented.

A. Procedures Developed To Address Specific Concerns

1. Classifying The Organizations and Building The Survey List

To reduce the response burden associated with the planned data collection, it became apparent early on that different forms of the questionnaire had to be designed for different types of organizations. In particular, it appeared desirable to have a version of the questionnaire that was specifically adapted to the unique organizational structure of large public (state) education agencies. But it was also apparent that other classes of performers (small education agencies, academic departments and other units located in academic institutions) required specialized data collection instruments. Ultimately the organizations were grouped into three different types or "sectors" and one or more separate questionnaires designed for each. The sectors were conceptualized as follows:

a. The public education sector, which consists of "large" agencies (state education agencies--SEA's--and local education agencies--LEA's--whose enrollment was 50,000 or greater during 1967-77) and "small" agencies (intermediate education agencies--ISA's--and local education agencies whose enrollment was between 10,000 and 49,999 during 1976-77);

b. The academic sector, which includes subdivisions of public and private two- and four-year colleges, and universities; and

c. A residual sector, which encompasses all other performing agencies, especially profit and nonprofit research and development organizations, but also hospitals, publishers and other media groups, foundations, associations, and agencies of state and local governments which are not education agencies (for example, correctional institutions). (Since the majority of organizations in this grouping are private RDD&E organizations, private schools, and other nongovernmental agencies, for lack of a better term the term "private sector" is frequently used in this report to describe this grouping, although it is really a residual category, including all performers who are neither academic organization nor located in public education agencies. See Appendix C for detail.)

For the public education sector the list of organizations to be surveyed was compiled by putting together three separate lists: a list of SEAs supplied by the Council of Chief State School Officers; a list of ISAs supplied by NIE; and a list, compiled by a commercial mail order firm, of LEAs of 10,000 and above average daily attendance (ADA). For the academic and private sectors, the base list had been compiled by NIE using 1972-1976 grant and contract recipient information. The lists

were supplemented by one prepared by the Institute for Scientific Information, giving the institutional affiliations of authors writing in a group of 82 education-related journals during a 24-month time period.

The public education sector entries were appropriate for survey use without corrections, but, in both the academic and private sectors, the lists contained misspellings, inappropriate abbreviations, and incomplete or missing street addresses. A more difficult problem in the academic sector was that, for a substantial number of institutions, multiple entries were given in which the suborganizations listed were "nested" within each other, without their relationship being apparent. [23] Moreover, there were many entries in which just a college or university and a principal investigator, but no specific suborganization were named. (If these entries had been used, we would have been faced with sending a questionnaire to a principal investigator, who might be long gone, and asking him/her to describe an entire institution which he/she might know little about, and which might not be appropriate for consideration as an education RDD&E performer.) A final difficulty in both the academic and private sectors was that either contact persons were not given at all,

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23. As an illustration, consider XYZ University, whose listings might include the School of Education, the Division of Parent Education and Family Counseling, the Reading Center, and the Graduate Department of Elementary Education. In this example, we would not know if the Division of Parent Education were part of the School of Education, if the Reading Center were part of the Graduate Department, etc.

or, if they were, the names were principal investigators of projects conducted as far back as five years ago.

To deal with these problems, much staff effort was devoted to correcting the lists in an attempt to make them as accurate and specific as possible. College catalogues, faculty directories, and phone calls were used to determine the correct affiliation of authors of journal articles, to identify appropriate respondents in large organizations, to untangle nested entries, and to correct misspellings and missing or inaccurate addresses. The lists were then merged into one computer file. When the file was edited, duplicate entries were removed and others discarded if they met one of the following criteria: a foreign address; a nonpublic school district; an agency of the Federal government; the second author of a journal article; an incomplete mailing address; a college or university without identification of the relevant suborganization (such as department or school); or an LEA with less than 10,000 enrollment. Finally, organizations that had asked to be included in the survey were added to the list.

2. Identifying Appropriate Units From The List: The Data Collection Approach

The organizations on the final mailing list represented potential education RDD&E performers that might or might not be eligible and appropriate for inclusion in the universe we were

trying to define. [24] The strategy used to identify actual performers and to collect information from them was flexible and somewhat nonconventional particularly in the public education and academic sectors, where it involved surveying individual RDD&E performing units, rather than using the traditional approach of simply contacting the head of the macro organization.

The specific strategy used for each sector is shown in Figure II-1. That strategy was as follows: In the public education sectors, the unit of interest was predefined as the entire agency. Therefore, the initial contact was with the agency director, who was asked to provide as complete a picture as possible of the agency's RDD&E activities. To facilitate response to that rather large request, three versions of the instrument were developed, two agency level questionnaires (one for small and one for large agencies), and a unit level questionnaire. If agency activities could be readily described in a single report, the agency level questionnaire was to be used. If, however, the RDD&E activities of the agency were so diverse or decentralized that a single report could not be easily completed covering all its RDD&E performing units, the agency director was requested to identify pertinent units so that a separate unit level questionnaire could be completed by each of them.

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24. Criteria used to determine eligibility for inclusion are described in Chapter III.

FIGURE 11-1

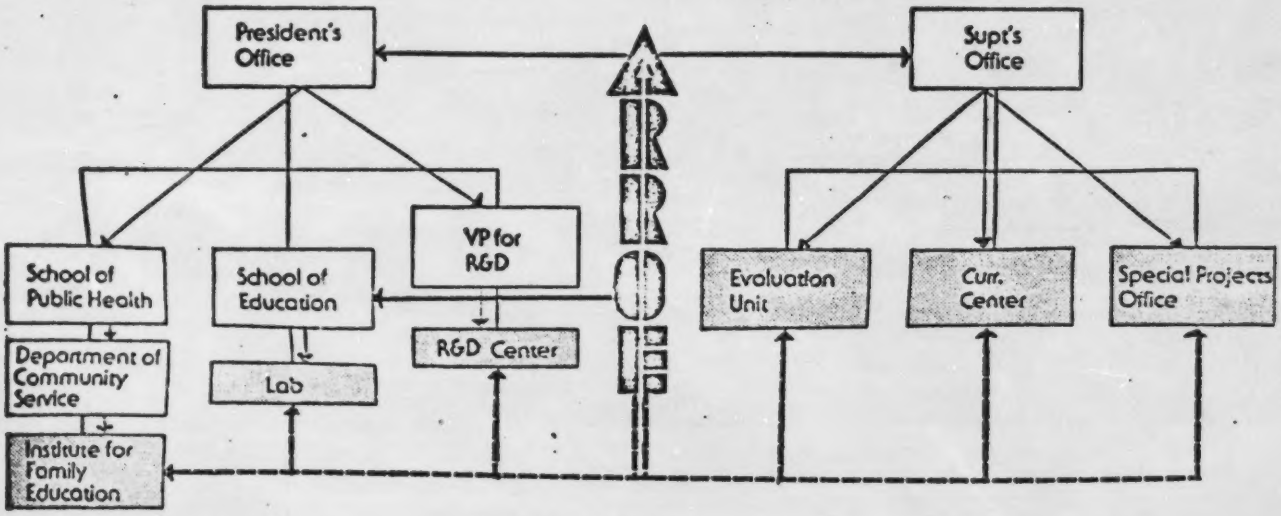
ARROE'S DATA COLLECTION APPROACH

Academic Sector

ARROE goes to each identified unit individually. Units may identify others for inclusion by forwarding their questionnaires, or sending names to ARROE.

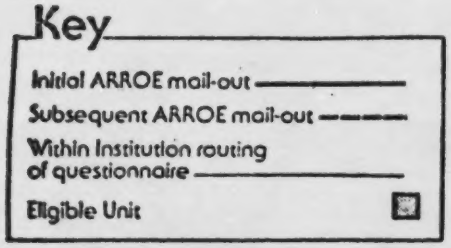
Public Sector

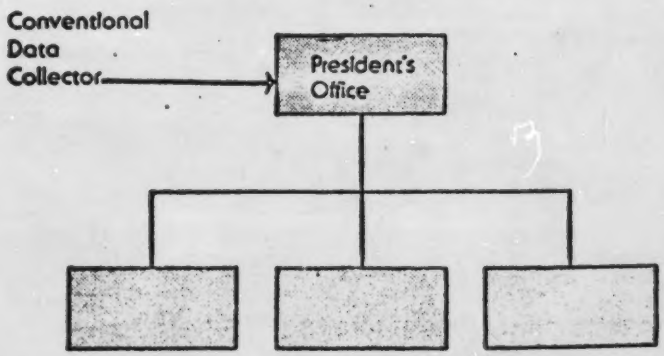
ARROE goes to director of agency. Mechanism is provided for director to identify important units, which are then surveyed separately.



CONVENTIONAL APPROACH

ARROE is using a conventional approach in the private sector. This approach involves going to the head of the organization for information about all units.





In the academic sector, the president of each college/university was contacted first, informed about the study, and given the option of preparing a single institution-wide report. If that option was not chosen, each identified unit on the list was then contacted separately. Each recipient could (a) name his/her own office as the "eligible performer;" (b) identify the performer by changing the "level" of organization named on the mailing label (e.g., from a school of education to a curriculum development center); (c) forward his/her questionnaire to a more appropriate respondent; and/or (d) suggest additional offices to be contacted. To avoid duplicative reporting, each recipient was supplied with a list of the other questionnaire recipients at the institution.

For the remaining organizations, a conventional approach was used. The director of the organization was contacted and asked to identify that part of the organization which was both appropriate for description in the Registry, and was one for which information concerning funding, personnel, and projects could be readily supplied. (In most cases this was simply the whole organization as named on the mailing label.)

3. Developing Definitions Of Education RDD&E

The need to develop meaningful definitions to classify social research and related activities has preoccupied many students and observers of this field. Most recently, new definitions have been adopted which capture these activities along dimensions geared to their ultimate purpose, seen as

either "knowledge production" or "knowledge application." [25] However ARROE did not adopt this terminology, because it was important that the data collected by ARROE be comparable to that collected in earlier studies sponsored by the Education Division of HEW. To help ensure comparability, the project drew upon National Center of Educational Statistics (NCES) terminology in its definitions of research, development, dissemination, and evaluation and policy studies. Since NCES does not define "education" in its glossary, the definition of that term was derived from the description of activities to be included as education in the Office of Management and Budget's Special Analyses of the U.S. Budget. Definitions of professional staff, full and part-time staff, support staff and total operating expenditures are those used by NCES. Definitions of other terms not found in traditional sources--e.g., "projects"--were developed in conjunction with Advisory Committee members. All such terms were defined in the body of the questionnaire or in the appendix.

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25. A recent NAS study, The Federal Investment in Knowledge of Social Problems, (Study Project on Social Research and Development, National Research Council, 1978), uses these two main categories in analyzing Federal expenditures and activities in various policy areas (health, education, community resources, etc.). NIE has modified these definitions and analyzed education expenditures by using three categories: knowledge production, problem solution, and utilization. (See Ward S. Mason and Carnot E. Nelson, Federal Funding of Educational R&D: R&D Function by Agency, Educational Researcher, June 1978, pp. 12-17.)

In addition, a supplementary list of definitions was developed to be used during telephone calls with respondents. These are shown in Appendix D.

Definitions that proved unclear or inappropriate were identified during the pretest and revised accordingly.

4. Providing For Confidential Reporting

In designing the survey, the project staff was concerned that some organizations might be reluctant to release for open use the information requested for inclusion in the Registry and Directory, either because they were providing us with estimates not for public consumption, or because, among private research firms in particular, some of the information might be considered as proprietary. In light of these considerations, a provision was built into the questionnaire to allow respondents to mark some information as not to be released with organizational identifiers. This provision, which is shown in Figure II-2, used a system of unshaded vs. shaded answer spaces. By entering the answer to a particular item in the unshaded space, the respondent designated that the information could be used in the Registry and Directory together with the organization name; information entered in shaded spaces would be used for the aggregate statistical report only. A provision was also built into the telephone version of the questionnaire to allow respondents to designate items as confidential.

FIGURE 11-2

ARROE CONFIDENTIALITY PROCEDURES

To differentiate between open and confidential data, this questionnaire uses a system of unshaded vs. shaded answer spaces. Any information which you enter in shaded spaces is for statistical analysis or internal bookkeeping only and will not be associated with the name of your organization. For some questions you have the choice of answering in either a shaded or an unshaded space. This is the information which NIE would like to use as descriptors of your organization in its **Registry**. If you are willing to have these descriptors associated with the name of your organization in the **Registry**, enter your answers in the unshaded areas. If you do not wish the descriptors used in association with your organization name, enter your answers in the **shaded** areas. These data will then be treated confidentially and used solely for aggregate statistical analyses. If you answer **only shaded** items, your organization will not be included in the **Registry** at all, but we nonetheless would appreciate receiving your responses for statistical purposes.

Sample Questions

34. How many professional staff[3] persons who were primarily involved in EDUCATION RDD&E activities during the year were employed directly by your organization either full[4] or part-time?[5]

	FULL-TIME		PART-TIME	
Professional staff				

43. What was the typical dollar amount of the EDUCATION RDD&E projects active during the fiscal year (i.e., the "modal" figure)? (*Please check one box only.*)

$2,000 or less	☐ 0
$2,001 - $10,000	☐ 1
$10,001 - $20,000	☐ 2
$20,001 - $50,000	☐ 3
$50,001 - $100,000	☐ 4
$100,001 - $500,000	☐ 5
More than $500,000	☐ 6

B. General Survey Procedures Used Across All Sectors

Figure II-3 shows the general data collection procedures and schedule followed for all sectors. Every organization--with the exception of the Office of the President of Academic Institutions[26] --received an initial mailing consisting of a cover letter explaining the survey's goals; the appropriate version of the questionnaire; a Prospectus describing proposed formats for the Registry and Directory; and a receipt post card to be returned to the ARROE office by the person who would be completing the questionnaire. (Two post cards were used in the academic sector, one for recipients who would be completing the questionnaire, the other for recipients who would be forwarding the questionnaire or nominating additional units.) At this beginning stage of data collection, a toll-free WATS line was installed for use by recipients who had questions about the materials they had been sent.

The second mailing--sent out two to four weeks after the first--consisted of a follow-up post card reminding recipients to complete the questionnaire, or to indicate why they would not

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26. The purpose of the contact with the Office of the President was to inform that official that we were going to survey units at the institution. Therefore, unlike other recipients, the Office of the President was sent an informational copy of the questionnaire, with instructions to return it only if that office conducted education RDD&E, or if a single report for the entire institution were being prepared. Because the contact with this group was informational in nature, telephone follow-up, etc., was not done.

FIGURE II-3

GENERAL DATA COLLECTION PROCEDURES AND SCHEDULE

Procedure	Dates				
	March	April	May	June	July
1st Mail	▲——▲				
Cover Letter Questionnaire Registry/Directory Prospectus Post Cards List of Other Recipients (Academic Sector)	3/9 - Office of the President 3/14 - Public - Large and Small 3/16 - Private 3/24 - Academic				
2nd Mail		▲			
Follow-up Post Card		4/10 - All Sectors			
Subsequent Mailings of Questionnaire Packets		▲——— As necessary upon request ———▲			
Telephone Questionnaire		▲——— 4/24 - Start, Public Small 5/9 - Start, Academic 5/18 - Start, Public-Large 5/30 - Start, Private ———▲ July 7 END			
Editing/Clarification Calls		▲———			▲ July 21 END

be completing it. The post card was sent to all organizations with which no contact had been made (i.e., they had not returned their questionnaire, called us, or sent back a postcard).

Two weeks after the postcard had been mailed, telephone follow-up calls were initiated. These were made, initially, to all recipients who still had not responded at all. The purpose of these calls was to administer the phone questionnaire, which, as noted earlier, contained a subset of the most important items in the mail instrument.

After the initial wave of calls had been completed, we contacted the following types of recipients: (1) those contacted during Round One of the calls who had promised to return their questionnaires, but had not; (2) persons who had sent in postcards or called promising to respond, but had not; and (3) organizations added to the list by survey respondents.

A final important part of this overall data collection process was the editing calls. These were made to all respondents who had not adequately completed a set of key items on the mail questionnaire.

III. FINDINGS: PART ONE
THE DATA BASE

A. Introduction

The past twenty years have seen a noticeable change in the kinds of organizations participating in the conduct of education RDD&E. In 1965, most education RDD&E followed the traditional pattern of academic research portrayed by Gideonese, and quoted in the NIE Databook. [27]

> Individual faculty members of [colleges and universities] singly or together, prepare proposals for work they would like to perform. . . . Procedures for gaining support . . . follow familiar patterns. College and university faculty members are constrained in their pursuit of research funds only by the policies of their respective institutions (p. 37).

By 1971, however, as noted by Biderman and Sharp, for research on social problems the pendulum was "swinging away from the autonomous social science of the academic institution and toward greater extra-academic. . . .activity." An education RDD&E research "industry" characterized by participants from school systems, private institutes, and for-profit service, consulting and R&D firms, as well as academicians, had developed. [28] Thus, the present scene is very different from

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27. Op cit.

28. Biderman, A. and L. Sharp. An Analysis of 36 Competitive Procurements of Social Program Evaluation Studies. Washington, D.C.: Bureau of Social Science Research, 1974. BSSR No. OG03-51.

that observed by Gideonese. As described in the NIE Databook, "a large proportion of activity [is now] conducted in organizations that did not exist 10 years ago (p. 37)."

Our concern in this chapter and in Chapters IV and V is to provide a current picture of the education RDD&E universe. We begin by presenting some general characteristics of the data base. Specifically, we describe:

- How the Data Base is Organized
- Eligibility Criteria, Response Rates and Number of Organizations Identified
- Differences Between Organizations Completing Mail and Phone Instruments
- Item Nonresponse and Use of the Confidentiality Provision

Chapters IV and V present substantive findings, covering a broad range of topics in Chapter IV, and a more detailed examination of key issues in Chapter V.

B. How The Data Base Is Organized

Data are presented in this report using three levels of analysis:

1. First, some findings are presented for sectors. As referenced earlier (pp. 18-19), the following major sector groupings are used:

- The public education sector (large agencies)--SEAs and LEAs with enrollments of 50,000 or greater;
- The public education sector (small agencies) ISAs and LEAs with enrollments of 10,000-49,999;
- The academic sector; and

- A residual sector for performers we could not classify elsewhere. (Since most of these are private organizations, this category is referred to as the "private sector" in most instances.)

2. Secondly, some findings are presented for institutions. For example, data are presented characterizing state, intermediate and local education agencies, or colleges and universities. In some cases, this type of analysis required aggregating data provided by a number of responding units at the institutions involved. Such aggregation was possible only for a limited number of variables--e.g., expenditures, numbers of staff, and numbers of projects--but not for others--e.g., organizational activities, percents of funds received from various sources and applied to various levels, and methods of dissemination of research results. Therefore, most of the analysis presented in this report is of a third type, namely:

3. Analysis by performing unit. For this type of presentation, the unit of analysis is the "organization" described on each individual questionnaire. Although the heterogeneity of these organizations precludes some types of analyses, ARROE's most detailed information is best presented at this level. Therefore, the analysis by "organizations" is used for the bulk of this report.

C. Eligibility Criteria And Numbers Of Organizations Identified

As described in Chapter II., the search for "potential" education RDD&E performers in the academic and private sectors

relied heavily upon listings of organizations that had received government or foundation grants or contracts for pertinent work, and upon a list of the organizational affiliations of authors in education journals. In the public education sectors, all state and known intermediate education agencies were contacted, as were all LEAs with an enrollment of 10,000 or greater. To make our lists as complete as possible, respondents in all sectors were encouraged to suggest names of other organizations to be contacted. A total of 6,346 potentially eligible organizations were identified in this manner and contacted by mail (Table III-1).

For 81 percent of these organizations a contact was ultimately established and, from those which were active and appeared eligible, information was collected. [29] Respondents were asked to complete a mail questionnaire; if the questionnaire had not arrived by a given cut-off date, a telephone interview was conducted. The majority of questionnaires were completed over the phone (62%). (An exception to this pattern is the large public education sector, where half of the organizations completed a mail questionnaire.)

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29. This 81 percent figure was computed as follows: Five kinds of responses were counted as legitimate: returning a usable mail questionnaire; completing the telephone interview; returning a postcard stating that the organization had not done pertinent work; forwarding the questionnaire to a more appropriate recipient; or indicating that the organization would be covered in another recipient's report. The rate given above is based on the number of these legitimate responses divided by the number of "good" addresses (i.e., not including defunct organizations, or nonforwardable addresses).

TABLE III-1

FINAL DATA COLLECTION RESULTS BY SECTOR

	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%[a]	(N)	%	(N)	%	(N)	%	(N)	%
No. of Organizations on Survey List	(1079)		(221)		(1391)		(3655)		(6346)	
Types of Responses Received										
Usable mail questionnaire	(337)	31	(115)	52	(309)	22	(768)	22	(1529)	24
Usable phone questionnaire	(590)	55	(55)	25	(573)	41	(1270)	35	(2488)	39
Will not return questionnaire, ineligible	(18)	2	(3)	1	(58)	4	(163)	4	(242)	4
Forwarded questionnaire	(0)	0	(0)	0	(1)	0	(107)	3	(108)	2
Covered by other report	(1)	0	(0)	0	(0)	0	(499)	14	(500)	8
Defunct	(8)	1	(0)	0	(134)	10	(118)	3	(260)	4
Nonforwardable, bad address	(1)	0	(0)	0	(69)	5	(11)	0	(81)	1
Didn't respond by mail, couldn't be reached by phone	(75)	7	(25)	11	(164)	12	(475)	13	(739)	12
Refusal	(33)	3	(6)	3	(23)	2	(85)	2	(147)	2
Promise to return	(14)	1	(9)	4	(52)	4	(101)	3	(176)	3
Not heard from at all	(2)	0	(8)	4	(8)	1	(58)	2	(76)	1
Response Rates[b]	88%		78%		79%		80%		81%	

[a]Column Percents.

[b]Percents are equal to the number of legitimate responses ("mail questionnaire," "phone questionnaire," "ineligible," "forwarded questionnaire," and "covered by other report") divided by the number of "good" addresses (i.e., not including defunct organizations and nonforwardable addresses).

Each of the responses was screened to determine if the organization was eligible for classification as an education RDD&E performer. The following eligibility criteria were used:

Only those organizations that had conducted education RDD&E activities during their last completed fiscal year were classified as currently active education RDD&E performers. In addition, two other key characteristics were required: distinct organizational identity (i.e., a consistently used name and address); and appreciable autonomy from higher levels of authority in managing and carrying out education RDD&E activities. Organizations meeting all three requirements were eligible for inclusion both in this report and in the Registry.

A second group of organizations had not done pertinent work during their last fiscal year, but had a history of such work during FY 72-76 and current capability. These organizations are excluded from this report, but were given brief Registry listings.

Two remaining categories of organizations were classified as ineligible for both the report and the Registry: (1) those with a history of activity but no current capability; and (2) those that had not performed any pertinent work either during their last fiscal year or during FY 72-76.

Table III-2 shows the number of organizations falling into each of these categories. Just under 40 percent of the group originally contacted are in the first category, so that 2,434 active education RDD&E performers were identified. Twenty eight percent of these are in the public education sectors, slightly over half (51%) are located within academic institutions, while 20 percent are organizations predominantly located in the private sector.

As shown in Table III-3, many of these organizations, particularly in the large public education and academic sectors, were in fact located at the same institution. Specifically:

- The 151 large public education organizations are located in 97 different agencies, i.e., 60 LEAs and 37 SEAs; and
- The 1,268 academic organizations are located in 423 different colleges and universities.

On the other hand, in the private and small public education sectors, each organization was located at a different institution (with a few exceptions) so that:

- The 537 small public education organizations came from 534 different agencies, i.e., 341 LEAs and 193 ISAs; and
- The 478 private sector organizations come from 476 different institutions.

In summary, the data presented in this report describe 37 state education agencies, 193 intermediate service agencies, 401 local education agencies, 423 colleges and universities, and 476 institutions of other types.

TABLE III-2

ELIGIBILITY STATUS BY SECTOR

Status	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%[d]
Eligible for report and Registry.	(537)	50	(151)	68	(478)	34	(1236)	34	(2402)[a]	38
Eligible for Registry only.	(33)	3	(1)	0	(82)	6	(112)	3	(228)	3
Ineligible: History of RDD&E, but no current capability. . .	(15)	1	(3)	1	(24)	2	(27)	1	(69)	1
Ineligible: No RDD&E during 1972-1976 fiscal years	(360)	33	(18)	8	(356)	26	(826)	22	(1560)	24
Ineligible: Other reason[b].	(9)	1	(0)	0	(135)	10	(724)	20	(868)	14
Eligibility not determined[c]	(125)	12	(48)	22	(316)	23	(730)	20	(1219)	19
Total	(1079)	100	(221)	100	(1391)	100	(3655)	100	(6346)	100

[a]An additional 32 eligible academic organizations were identified by the presidents of academic institutions contacted for a total of 2434 eligible organizations.

[b]Includes organizations that forwarded their questionnaires, were covered by another report, or are defunct.

[c]Includes organizations in the following response categories: bad address; could not contact; refusal; promise to return; and not heard from at all.

[d]Percents in this table and subsequent tables do not necessarily add to 100% due to rounding.

TABLE III-3

DISTRIBUTION OF INSTITUTIONS BY NUMBER OF ORGANIZATIONS LOCATED IN EACH

Number of Organizations	Number of Institutions			
	Public - Small[a]	Public - Large[b]	Private	Academic
1.	533	76	474	221
2.	0	9	2	66
3.	0	2	-	35
4.	1	5	-	18
5.	-	1	-	23
6.	-	2	-	10
7.	-	2	-	7
8.	-	-	-	7
9.	-	-	-	8
10.	-	-	-	6
11.	-	-	-	5
12.	-	-	-	6
13.	-	-	-	1
14.	-	-	-	2
15.	-	-	-	0
16.	-	-	-	0
17.	-	-	-	1
18.	-	-	-	2
19.	-	-	-	0
20.	-	-	-	2
21.	-	-	-	1
22.	-	-	-	2
Total Number of Institutions	534	97	476	423
Total Number of Organizations	537	151	478	1268

Breakdown of Public Education Sectors

	Small LEAs	Large LEAs	ISAs	SEAs
Number of Institutions	341	60	193	37
Number of Organizations	341	78	196	73

[a]Small LEA's + ISA's.

[b]Large LEA's + SEA's.

Table III-4 presents a closer look at the public education agencies, showing the number of agencies of each type on the original survey list, the number responding to the survey, and the number eligible for inclusion in this report.

D. Comparison Of Organizations Completing Mail Vs. Phone Instruments

The ARROE report is based on data furnished by respondents through mailed questionnaires and phone interviews. The majority of eligible organizations supplied data by phone; only among large public agencies was there a predominance of mailed responses (Table III-5).

Table III-6 presents information comparing organizations answering by mail to those answering by phone on four key characteristics. There are significant differences between these two groups ($p \leq .05$) for two characteristics: amount reportedly spent on education RDD&E, and number of projects conducted. (In general, the figures obtained over the phone were smaller than those obtained by mail although this pattern does not hold for education RDD&E expenditures in the academic sector.) The differences between phone and mail respondents were not significant for two other characteristics: number of full-time professional education RDD&E staff members, and number of full-time staff with doctorates.

Since the telephone interview was restricted to a subset of mail questionnaire items, several segments of this report are

TABLE III-4

DATA COLLECTION AND ELIGIBILITY RESULTS FOR PUBLIC EDUCATION AGENCIES, BY TYPE OF AGENCY

Agency Type	No. on Survey List	No. Responding	No. Reporting Education RDD&E Activity During Last Fiscal Year
State Education Agency	57	43	37
Intermediate Service Agency	391	361	193
Local Education Agency.	755	640	401

TABLE III-5

METHOD OF RESPONSE USED BY ORGANIZATIONS
IN THE ARROE DATA BASE, BY SECTOR

Method	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Mail Questionnaire . . .	(185)	34.	(110)	73	(194)	41	(582)	46	(1071)	44
Phone Questionnaire . . .	(352)	66	(41)	27	(284)	59	(686)	54	(1363)	56
Total Number of Organizations	(537)	100	(151)	100	(478)	100	(1268)	100	(2434)	100

TABLE III-6

COMPARISON OF ORGANIZATIONS COMPLETING MAIL AND PHONE INSTRUMENTS, BY SECTOR

	Public - Small				Public - Large				Private				Academic				F[a]	df
	Mail		Phone		Mail		Phone		Mail		Phone		Mail		Phone			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median		
Education RD&E Dollars, In Thousands.	$146	$60	$97	$35	$742	$300	$353	$140	$862	$200	$534	$132	$371	$83	$425	$100	5.14	.02
Number of Professional Full-Time Staff	4	1	4	1	11	6	12	5	16	4	12	4	11	2	10	2	.332	.56
Number of Full-Time Staff with Doctorates.	1	1	1	0	3	2	4	2	5	1	4	1	7	1	7	1	.485	.49
Number of Projects.	11	5	8	4	28	10	23	8	9	4	10	3	13	5	11	4	18.937	.00
Number of Organizations Responding	(176-182)		(268-347)		(76-91)		(31-39)		(162-183)		(192-266)		(499-562)		(444-657)			
Number of Missing Cases	(3-9)		(5-84)		(19-34)		(2-10)		(9-34)		(18-92)		(20-83)		(29-242)			
Total (N) in Group	(185)		(352)		(110)		(41)		(194)		(284)		(582)		(686)			
Total (N) in Sector	(537)				(151)				(478)				(1268)					

[a]This F ratio tests significance of differences between mail and phone respondents.

based on information provided by mail respondents only. In view of the findings shown in Table III-6, data based on mail questionnaires only should be interpreted with caution, since it appears that high-volume performers are overrepresented among mail respondents.

E. Item Nonresponse And Use Of The Confidentiality Provision

Table III-7 presents the item nonresponse for key questionnaire items. Nonresponse was fairly high for two items--education RDD&E expenditures and percent of full-time staff with doctorates--but low for others, such as staff size, consortia participation, and number of projects conducted. (A complete description of item response rates is available in the separate report mentioned in Chapter I, page 16). Each table presented in Chapters IV. and V. of the present report also indicates the number of organizations not responding to a particular item.

Table III-8 shows the extent to which the confidentiality option (described in Chapter II., page 26) was used for key items. The provision was most often used for financial data, suggesting that such a procedure is warranted for multi-purpose surveys of the ARROE type.

F. Summary

This report is based on data from 2,434 reporting organizations located in 1,530 different institutions. Although we succeeded in contacting the overwhelming majority of

TABLE III-7

NUMBER AND PERCENT OF RESPONDENTS NOT ANSWERING KEY QUESTIONNAIRE ITEMS, BY SECTOR .

Item	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Education RDD&E Expenditures.	(93)	17	(44)	29	(124)	26	(325)	26	(586)	24
Full-Time Staff Size. . . .	(9)	2	(21)	14	(31)	6	(49)	4	(110)	5
Organizational Speciality .	-	-[a]	-	-[a]	(17)	4	(15)	12	(32)	1
Percentage of Full-Time Staff with Doctorates . .	(169)	31	(30)	20	(128)	27	(427)	34	(754)	31
Consortia Participation . .	(18)	3	(7)	5	(17)	4	(54)	2	(96)	4
Number of Projects Conducted	(13)	2	(36)	24	(35)	7	(92)	7	(176)	7
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

[a]Question not asked in this sector (except for respondents describing specialized units of agencies).

TABLE III-8

PERCENT OF RESPONDENTS DESIGNATING KEY QUESTIONNAIRE ITEMS AS "CONFIDENTIAL," BY SECTOR

Item	Sector				TOTAL
	Public - Small	Public - Large	Private	Academic	
Total Operating Expenditures. . .	41	41	51	58	52
Education RDD&E Expenditures. . .	18	32	28	34	29
Full and Part-Time Staff Size . .	12	24	18	17	17
Number of Staff with Doctorates .	11	26	19	18	17
Consortia Participation	12	28	11	11	12
Number of Projects Conducted. . .	12	22	16	18	17

organizations which we believed to be likely education RDD&E performers, and obtained data from the bulk of those whose eligibility we ascertained, the limitations of the data base should not be minimized:

- We may have overlooked performers in the list building process;
- At the time of data collection cut-off, we had not "resolved" 19 percent of the original cases, some of which might have become survey-eligible had we allowed more time for investigation;
- Only 44 percent of the respondents completed the mail questionnaire; for the others, a smaller data set based on telephone interviews is available;
- Possible sources of bias associated with the two response modes have not been assessed in depth; and
- item nonresponse was fairly high for several key items.

No attempt has been made to weight any of the data presented here to correct for the deficiencies mentioned. We believe that the utility of the analyses in this report resides in the tracing of broad-based relationships and the development of "ball-park" descriptors, rather than a precise numerical accounting which a survey of this type cannot be expected to yield.

IV. FINDINGS: PART TWO
OVERVIEW OF THE UNIVERSE

The universe of education RDD&E performers can be examined at various levels of detail: by sector, by institution and by performing unit.

A. Analysis By Sector

Organizations that provided data to ARROE reported spending $734,884,000[30] on education RDD&E activities during their last fiscal year. They reported employing 22,000 full-time staff members who work primarily on these activities. About 26,000 projects[31] were reportedly conducted. Money, staff and projects are distributed across sectors as shown in Table IV-1. Specifically:

- Fifty-one percent of the funds, 58 percent of the staff and 55 percent of the projects are located in the academic sector;
- Thirty-three percent of the funds, 27 percent of the staff and 16 percent of the projects are in the private sector; and
- Sixteen percent of the funds, 15 percent of the staff and 30 percent of the projects are found in the public education sectors.

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30. This amount ($734,884,000) represents the total expenditures incurred by the organizations during their last fiscal year for all education RDD&E activities, both internally and externally funded. Comparisons between the $734,884,000 figure and figures reported by other researchers are made in Chapter V.

31. A project was defined as an activity which has an assigned staff, is directed toward a specific problem or topic, and is conducted within a specific time limit.

TABLE IV-1

DISTRIBUTION OF EDUCATION RDD&E FUNDS, FULL-TIME PROFESSIONAL STAFF, AND PROJECTS, BY SECTOR

Sector	Funds		Staff		Projects	
	Amount	%	(N)	%	(N)	%
Public - Small.	$ 51,670,000	7	1,917	9	4,594	18
Public - Large.	67,318,000	9	1,454	6	3,008	12
Private	242,273,000	33	5,982	27	4,149	16
Academic.	373,623,000	51	12,933	58	14,331	55
Total	$734,884,000	100	22,286	100	26,082	100

Thus, fully one-half of the education RDD&E resources (i.e., funds and staff) identified by ARROE are located in the academic sector, and about one-third are in the private sector. The public education sectors are a distant third, with only about 15 percent of the resources. [32] (The fact that the distribution of projects does not conform to this pattern is not unexpected, since projects may be of various sizes and have various staffing requirements.)

B. Analysis By Institution

As described earlier, a number of the organizations identified by ARROE were located at the same institutions, particularly in the public education and academic sectors. In this section, data aggregated at the institutional level are presented.

1. State Education Agencies

The ARROE data describe 37 state education agencies. (See Table IV-2.) Distributions of these agencies by education RDD&E expenditures, staff size, and number of projects conducted are shown in Tables IV-3, IV-4 and IV-5.

These tables indicate the following:

- The education RDD&E expenditures of most state education agencies are modest. Over one-half (56%) reported spending

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32. In interpreting this finding, several factors which might alter the shape of the distribution of expenditures must be considered. Briefly, we feel that there may be some underreporting of expenditures in all sectors. These considerations are described in more detail in Chapter V.

TABLE IV-2

STATE EDUCATION AGENCIES INCLUDED IN THE ARROE DATA BASE

Alabama Department of Education
Alaska Department of Education
Arkansas Department of Education
Department of Education, American Samoa
California State Department of Education
Delaware Department of Public Instruction
Florida Department of Education
Illinois Office of Education
Indiana Department of Public Instruction
Iowa Department of Instruction
Kansas State Department of Education
State of Louisiana Department of Education
Maine Department of Education
Maryland State Department of Education
Mississippi Department of Education
Missouri State Department of Elementary and Secondary Education
Montana Department of Public Instruction
New Hampshire State Department of Education
Bureau of Research and Assessment, New Jersey
New York State Education Department
North Carolina Department of Public Instruction
North Dakota Department of Public Instruction
Ohio Department of Education
Oklahoma Department of Education
Oregon Department of Education
Pennsylvania Department of Education
Rhode Island Department of Education
South Carolina Department of Education
Division of Elementary and Secondary Education, South Dakota
Tennessee Department of Education
Utah State Board of Education
Vermont Department of Education
Department of Education, Virgin Islands
Washington Superintendent of Public Instruction
West Virginia Department of Education
Wisconsin Department of Public Instruction
Wyoming Department of Education

Note: The final response status of the State Education Agencies not included in the ARROE data base was as follows:

Did Not Conduct RDD&E Activities: Arizona, Colorado, Georgia, Idaho, Massachusetts, Nevada.

Responded After Data Collection Cut-Off: Hawaii, Puerto Rico.

Could Not Contact: Connecticut, District of Columbia, Minnesota, New Mexico.

Refusal or Questionnaire Not Returned: Canal Zone, Guam, Kentucky, Michigan, Nebraska, Texas, Trust Territories, Virginia.

TABLE IV-3

DISTRIBUTION OF STATE EDUCATION AGENCIES BY AMOUNT SPENT FOR EDUCATION RDD&E

Amount Spent	(N)	%	Cumulative %
$ 49,000 or less.	(1)	3	3
$ 50,000 - 99,000.	(2)	6	9
$ 100,000 - 149,000.	(2)	6	15
$ 150,000 - 249,000.	(5)	16	31
$ 250,000 - 499,000.	(8)	25	56
$ 500,000 - 999,000.	(5)	16	72
$1,000,000 - 2,499,000.	(5)	16	88
$2,500,000 - 4,999,000.	(3)	9	97
$5,000,000 or more.	(1)	3	100
MEAN = $1,180,000 MEDIAN = $ 374,000			
Number of Agencies Reporting	(32)	100	
Missing Cases	(5)		
TOTAL (N)	(37)		

TABLE IV-4

DISTRIBUTION OF STATE EDUCATION AGENCIES BY NUMBER OF FULL-TIME PROFESSIONALS PRIMARILY ENGAGED IN EDUCATION RDD&E ACTIVITIES

Number of Staff	(N)	%	Cumulative %
0	(1)	3	3
1	(5)	15	18
2	(1)	3	21
3-5	(3)	9	30
6-9	(6)	18	48
10-19	(5)	15	63
20-49	(11)	32	95
50 +	(2)	6	101[a]
MEAN = 17 MEDIAN = 10			
Number of Agencies Responding	(34)	101[a]	
Number of Missing Cases	(3)		
TOTAL (N)	(37)		

[a]Percents do not total 100 because of rounding.

TABLE IV-5

DISTRIBUTION OF STATE EDUCATION AGENCIES BY NUMBER OF EDUCATION RDD&E PROJECTS CONDUCTED

Number of Projects	(N)	%	Cumulative %
0	(1)	3	3
1-4	(6)	19	22
5-9	(5)	16	38
10-19	(9)	29	67
20-49	(4)	13	80
50-99	(3)	10	90
100 +	(3)	10	100
MEAN = 27 MEDIAN = 14			
Number of Agencies Reporting	(31)	100	
Number of Missing Cases	(6)		
TOTAL (N)	(37)		

less than $500,000 for such activities, and nearly three-quarters less than $1,000,000.

- The agencies are bimodally distributed by staff size. Nearly one-half (48%) indicated that less than 10 of their full-time professionals are primarily engaged in education RDD&E activities. On the other hand, 38 percent have staffs of 20 professionals or more primarily engaged in this type of work.

- Two-thirds of the agencies reported conducting less than 20 education RDD&E projects, but 20 percent conducted at least 50 projects. (It is important to reiterate, however, that a "project" is not a uniform unit of analysis since project sizes may vary tremendously.)

2. Intermediate Service Agencies

The ARROE data base includes 193 intermediate service agencies. These are agencies that generally do not operate schools except, in some cases, those serving special populations such as the handicapped. Rather, they tend to offer to LEAs a wide range of support services, such as transportation, data processing, legal, audio-visual, purchasing and technical assistance services. [33]

Distributions of these agencies by education RDD&E expenditures, full-time education RDD&E staff size, and number of education RDD&E projects conducted is shown in Tables IV-6 through IV-8. These tables indicate that:

- The resources used by intermediate service agencies for education RDD&E activities are typically quite small. Over one-third spent less than $25,000 and over one-half less than $50,000 on these activities. Similarly, nearly

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33. For a more complete description of the history, organization, and functions of intermediate service agencies see: Campbell, Roald, et al. The Organization and Control of American Schools. Columbus, Ohio: Charles E. Merrill, 1970.

TABLE IV-6

DISTRIBUTION OF INTERMEDIATE SERVICE AGENCIES BY AMOUNT SPENT FOR EDUCATION RDD&E

Amount Spent	(N)	%	Cumulative %
$ 24,000 or less	(58)	36	36
$ 25,000 - 49,000	(24)	15	51
$ 50,000 - 99,000	(15)	9	60
$ 100,000 - 149,000	(14)	9	69
$ 150,000 - 249,000	(17)	10	79
$ 250,000 - 499,000	(20)	12	91
$ 500,000 - 999,000	(8)	5	96
$1,000,000 - 2,499,000	(6)	4	100
MEAN = $169,000 MEDIAN = $ 45,000			
Number of Agencies Reporting	(162)	100	
Number of Missing Cases	(31)		
TOTAL (N)	(193)		

TABLE IV-7

DISTRIBUTION OF INTERMEDIATE SERVICE AGENCIES BY NUMBER OF FULL-TIME PROFESSIONALS PRIMARILY ENGAGED IN EDUCATION RDD&E ACTIVITIES

Number of Staff	(N)	%	Cumulative %
0	(58)	30	30
1	(35)	18	48
2	(19)	10	58
3-5	(38)	20	78
6-9	(11)	6	84
10-19	(13)	7	91
20-49	(14)	7	98
50 +	(3)	2	100
MEAN = 6 MEDIAN = 2			
Number of Agencies Reporting	(191)	100	
Number of Missing Cases	(2)		
TOTAL (N)	(193)		

TABLE IV-8

DISTRIBUTION OF INTERMEDIATE SERVICE AGENCIES BY NUMBER OF EDUCATION RDD&E PROJECTS CONDUCTED

Number of Projects	(N)	%	Cumulative %
0	(16)	8	8
1-4	(94)	49	57
5-9	(42)	22	79
10-19	(24)	13	92
20-49	(8)	4	96
50-99	(4)	2	98
100 +	(2)	1	99[a]

MEAN = 9
MEDIAN = 4

Number of Agencies Reporting	(190)	99[a]
Number of Missing Cases	(3)	
TOTAL (N)	(193)	

[a]Percents do not total 100 because of rounding.

one-third (30%) reported that none of their full-time professional staff members are primarily involved in education RDD&E work, and an additional 18 percent employ only one full-time professional with primary responsibility in that area. However, 14 intermediate service agencies reported education RDD&E expenditures of $500,000 or more, and 17 agencies reported employing 20 or more full-time education RDD&E professionals.

- Sixteen agencies (8%) did not engage in any project organized RDD&E activities during their last completed fiscal year. However, the majority (49% or 94 agencies) reported conducting about 1-4 such projects. Only 14 agencies (7%) conducted 20 or more projects.

The largest intermediate service agencies--all reporting expenditures of $500,000 or more--are listed by name in Table IV-9.

3. Local Education Agencies

A total of 401 local education agencies are included in the ARROE data base. Based on 1976 NCES data, 60 of these are large agencies with enrollments of 50,000 or above, while the remainder have enrollments of 10,000-49,999.

Distributions of these agencies by education RDD&E expenditures, education RDD&E staff size, and number of projects conducted are shown in Tables IV-10 through IV-12. The following findings are noteworthy:

- Nearly two-thirds of the agencies (65%) spent less than $100,000 on education RDD&E activities during their last completed fiscal year. More than 90 percent spent less than $500,000. Only 7 agencies reported spending $1 million or more for this type of work.

- More than one-quarter of the agencies (26%) have no full-time professionals, and another 27 percent only one full-time professional primarily engaged in education RDD&E activities. Eighteen agencies (5%) employ 20 or more

TABLE IV-9

INTERMEDIATE SERVICE AGENCIES REPORTING EXPENDITURES OF $500,000 OR MORE FOR EDUCATION RDD&E DURING THEIR LAST COMPLETED FISCAL YEAR
(Listed in Order of Highest to Lowest Expenditures)

Name	State
Philadelphia Intermediate Unit 26	PA
Montgomery County Intermediate Unit 23	PA
BOCES - Albany - Schenectady *et al.*	NY
Pioneer Cooperative Education Service Agency	GA
Wayne County Intermediate School District	MI
Oakland Intermediate School District	MI
Educational Service Unit I	NB
ACES - AREA Cooperative Education Services	CT
Colonial Northampton Intermediate Unit 20	PA
Lancaster - Lebanon Intermediate Unit 13	PA

Note: Does not include 4 agencies requesting that their expenditure data be kept confidential.

TABLE IV-10

DISTRIBUTION OF LOCAL EDUCATION AGENCIES BY AMOUNT SPENT FOR EDUCATION RDD&E

Amount Spent	(N)	%	Cumulative %
$ 24,000 or less.	(85)	26	26
$ 25,000 - 49,000.	(54)	16	42
$ 50,000 - 99,000.	(74)	23	65
$ 100,000 - 149,000.	(34)	10	75
$ 150,000 - 249,000.	(24)	7	82
$ 250,000 - 499,000.	(37)	11	93
$ 500,000 - 999,000.	(12)	4	97
$1,000,000 - 2,499,000.	(5)	2	99
$2,500,000 - 4,999,000.	(1)	0	99
$5,000,000 or more.	(1)	0	99[a]

MEAN = $165,000
MEDIAN = $ 54,000

Number of Agencies Reporting	(327)	99[a]
Number of Missing Cases	(74)	
TOTAL (N)	(401)	

[a]Percents do not total 100 because of rounding.

TABLE IV-11

DISTRIBUTION OF LOCAL EDUCATION AGENCIES BY NUMBER OF FULL-TIME PROFESSIONALS PRIMARILY ENGAGED IN EDUCATION RDD&E ACTIVITIES

Number of Staff	(N)	%	Cumulative %
0	(103)	26	26
1	(105)	27	53
2	(55)	14	67
3-5	(68)	17	84
6-9	(29)	7	91
10-19	(14)	4	95
20-49	(15)	4	99
50 +	(3)	1	100
MEAN = 4 MEDIAN = 1			
Number of Agencies Reporting	(392)	100	
Number of Missing Cases	(9)		
TOTAL (N)	(401)		

TABLE IV-12

DISTRIBUTION OF LOCAL EDUCATION AGENCIES BY NUMBER OF EDUCATION RDD&E PROJECTS CONDUCTED

Number of Projects	(N)	%	Cumulative %
0	(29)	8	8
1-4	(135)	35	43
5-9	(102)	27	70
10-19	(65)	17	87
20-49	(36)	9	96
50-99	(8)	2	98
100 +	(8)	2	100
MEAN = 13 MEDIAN = 5			
Number of Agencies Reporting	(383)	100	
Number of Missing Cases	(18)		
TOTAL (N)	(401)		

full-time staff members with primary responsibility in this area.

- Seventy percent of the agencies conducted fewer than 10 education RDD&E projects during their last fiscal year.

Table IV-13 lists by name those agencies reporting education RDD&E expenditures of $500,000 or more.

4. Academic Institutions

Table IV-14 shows the distribution of total education RDD&E expenditures by colleges and universities, based on reports from all organizations at each institution. Although 83 colleges and universities reported expenditures of $1 million or more, the expenditures of most institutions are small. More than half (55%) spent less than $250,000 and two-thirds (65%) less then $500,000 for these activities.

Distributions of institutions by numbers of education RDD&E personnel and projects are shown in Tables IV-15 and IV-16. Over 50 percent reported that 5 or fewer of their full-time professionals have education RDD&E activities as their primary responsibility; nearly three-quarters have fewer than 20 such employees. Two-thirds (65%) of the institutions conduct fewer than 20 education RDD&E projects, but a sizable minority (18%) reported conducting 50 or more.

Table IV-17 lists the 13 institutions reporting expenditures of $5 million or more for education RDD&E work.

TABLE IV-13

LOCAL EDUCATION AGENCIES REPORTING EXPENDITURES OF $500,000 OR MORE FOR EDUCATION RDD&E DURING THEIR LAST COMPLETED FISCAL YEAR
(Listed in Order of Highest to Lowest Expenditures)

Name	State
Indianapolis Public Schools	IN
School District of Philadelphia	PA
Los Angeles Unified School District	CA
Leon County Schools	FL
Atlanta City Schools	GA
Baltimore City Schools	MD
Madison Metropolitan School District	WI
Portland Public School District I J	OR
Simi Valley Unified School District	CA
Okaloosa County Schools	FL
Pontiac Public Schools	MI

Note: This table does not include 8 LEAs requesting that expenditure data be kept confidential.

TABLE IV-14

DISTRIBUTION OF ACADEMIC INSTITUTIONS BY AMOUNT SPENT FOR EDUCATION RDD&E

Amount Spent	(N)	%	Cumulative %
$ 24,000 or less	(57)	16	16
$ 25,000 - 49,000	(36)	10	26
$ 50,000 - 99,000	(40)	11	37
$ 100,000 - 149,000	(30)	8	45
$ 150,000 - 249,000	(34)	10	55
$ 250,000 - 499,000	(41)	11	66
$ 500,000 - 999,000	(36)	10	76
$1,000,000 - 2,499,000	(46)	13	89
$2,500,000 - 4,999,000	(24)	7	96
$5,000,000 and over	(13)	4	100
MEAN = $1,046,000 MEDIAN = $ 181,000			
Number of Institutions Reporting	(357)	100	
Missing Cases	(66)		
TOTAL (N)	(423)		

TABLE IV-15

DISTRIBUTION OF ACADEMIC INSTITUTIONS BY NUMBER OF FULL-TIME PROFESSIONALS PRIMARILY ENGAGED IN EDUCATION RDD&E ACTIVITIES

Number of Staff	(N)	%	Cumulative %
0	(99)	24	24
1	(36)	9	33
2	(30)	7	40
3-5	(54)	13	53
6-9	(45)	11	64
10-19	(40)	10	74
20-49	(54)	13	87
50 +	(58)	14	101[a]
MEAN = 31 MEDIAN = 5			
Number of Institutions Reporting	(416)	101[a]	
Number of Missing Cases	(7)		
TOTAL (N)	(423)		

[a]Percents do not total 100 because of rounding.

TABLE IV-16

DISTRIBUTION OF ACADEMIC INSTITUTIONS BY NUMBER OF EDUCATION RDD&E PROJECTS CONDUCTED

Number of Projects	(N)	%	Cumulative %
0	(14)	3	3
1-4	(98)	24	27
5-9	(88)	22	49
10-19	(65)	16	65
20-49	(66)	16	81
50-99	(37)	9	90
100 +	(38)	9	99[a]
MEAN = 35 MEDIAN = 10			
Number of Institutions Reporting	(406)	99[a]	
Number of Missing Cases	(17)		
TOTAL (N)	(423)		

[a]Percents do not total 100 because of rounding.

TABLE IV-17

ACADEMIC INSTITUTIONS REPORTING EXPENDITURES OF $5,000,000 OR MORE FOR EDUCATION RDD&E DURING THEIR LAST COMPLETED FISCAL YEAR
(Listed in Order of Highest to Lowest Expenditures)

Name	State
Ohio State University	Ohio
University of Wisconsin at Madison	Wisconsin
Indiana University	Indiana
Pennsylvania State University	Pennsylvania
Columbia University	New York
California State University at San Jose	California
Michigan State University	Michigan
University of Minnesota at Minneapolis	Minnesota
University of Illinois at Urbana	Illinois
New York University	New York
University of Utah	Utah
University of North Carolina at Chapel Hill	North Carolina
College of Medicine and Dentistry of New Jersey	New Jersey

5. Private Sector Institutions

Since the 478 organizations in this sector are located in 476 different institutions, the terms "organizations" and institution" are synonymous for this group. Therefore, no private sector analysis by institution is necessary.

C. Analysis By Performing Unit Or Organization

ARROE identified 2,434 organizations that had performed education RDD&E activities during their last completed fiscal year. The nature of these organizations varies tremendously, since the choice of "organization" to be described was left to the discretion of the respondent, using ARROE's broad eligibility criteria. In the academic sector, for example, some "organizations" are entire universities, while others are institutional subdivisions. In the public education sectors, the organization may be an entire agency or an agency subdivision. However, as explained earlier, ARROE's most detailed information is available at the organizational level. Therefore, despite the fact that organizations are not uniform units, most of the remaining data in this report are presented at that level. In some instances, the information is also reaggregated by sector.

The remainder of this chapter provides an overview of organizational characteristics in the following areas:

- Concentration of Effort
- Level of RDD&E Work
- Organizational Mission
- Geographic Distribution
- Age

1. Concentration Of Effort

Despite the fact that over 2,400 organizations reported education RDD&E activities, the bulk of the expenditures are concentrated in a relatively few organizations:

Figure IV-1 cumulates education RDD&E expenditures ($734,884,000) with performing organizations arrayed by size of expenditures. Looking at the graph, it is apparent that, for example, over 80 percent of the total expenditures are accounted for by the top 20 percent of the organizations, and 90 percent of the expenditures by about 30 percent of the organizations. (The diagonal line shows the graph that would have resulted from an even distribution, e.g., 20 percent of the organizations accounting for 20 percent of the funding, etc.)

Table IV-18 shows the percent of total expenditures accounted for by organizations reporting education RDD&E

FIGURE IV-1

CUMULATIVE RDD&E EXPENDITURES AND PERCENT OF ORGANIZATIONS INVOLVED

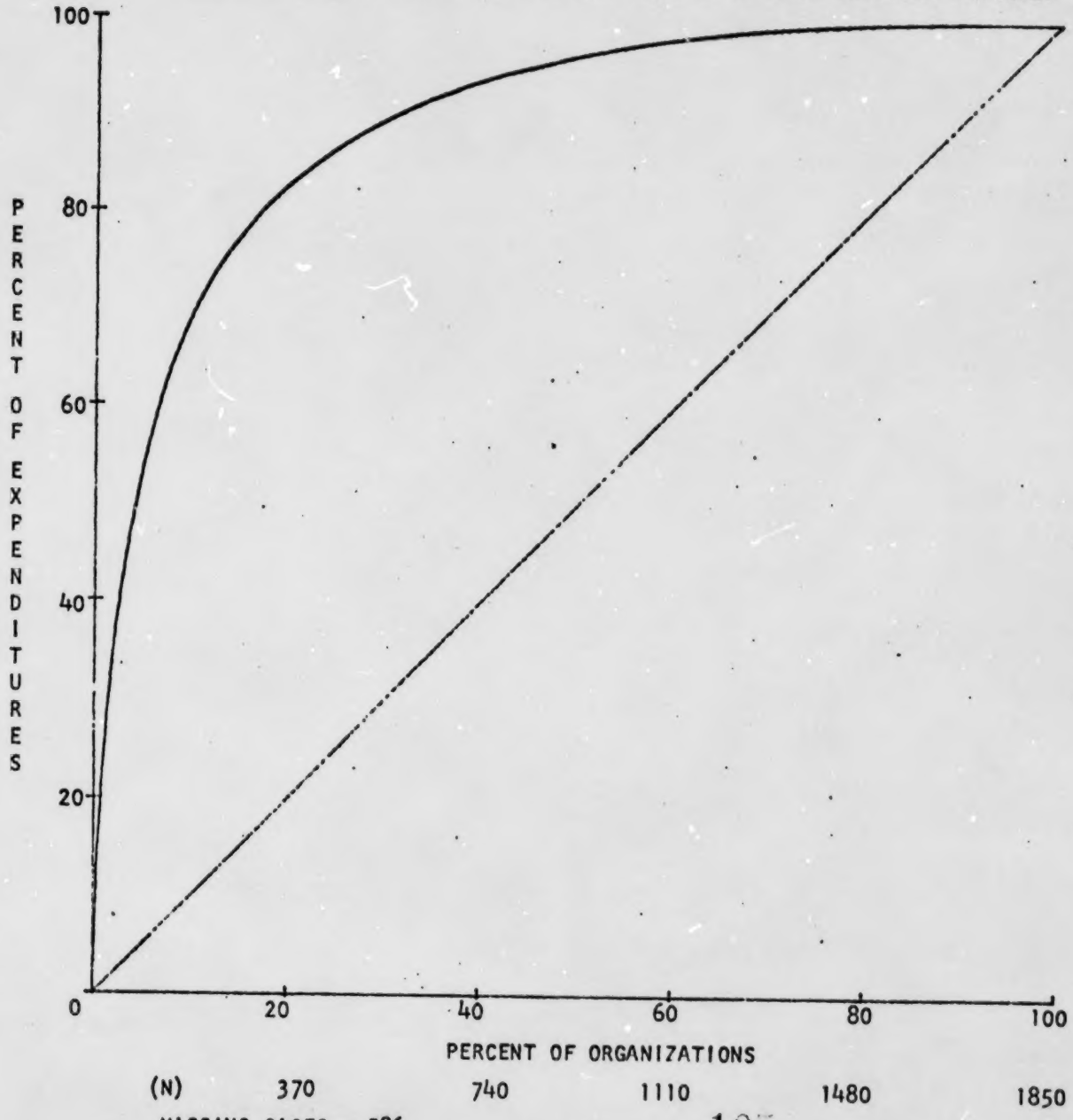

TABLE IV-18

AMOUNT AND PERCENT OF TOTAL EDUCATION RDD&E EXPENDITURES ACCOUNTED FOR BY LARGE ORGANIZATIONS

Organizations With Expenditures of:	(N)	Aggregate Amount Spent for Education RDD&E	Percent of Total Education RDD&E Expenditures
$5 million or more	(21)	$193,206,000	26
$ 2.5 - 4.999 million	(37)	129,091,000	18
$1 - 2.499 million	(114)	174,750,000	24
All other organizations	(1676)	237,837,000	32
Total	(1848)	$734,884,000	100

Missing cases = 586

expenditures of $1 million or more. As a whole, that group of 172 organizations--representing about 9 percent of the group responding to the expenditure item--accounts for nearly 70 percent of all expenditures reported. [34] The $5 million-plus organizations alone spend more than one-quarter of the total amount.

Since nearly 70 percent of the funding is concentrated in 172 large organizations it is important to take a closer look at that group. This is done in Table IV-19 which classifies the $1 million-plus organizations by sector. The proportion of academic organizations among this group is about the same as among all organizations (53% vs. 52%). However, the private sector organizations comprise 34 percent of the large group vs. only 20 percent of the universe as a whole. On the other hand, the public education sector is decidedly underrepresented among the major performers; whereas 28 percent of all education RDD&E performers were found in local, state and intermediate education agencies, only 22 public education organizations (12%) were among those which spent more than $1 million for education RDD&E during the period covered by the survey.

2. Level Of RDD&E Work

Because of the concentration of expenditures in relatively few organizations, the universe in general is characterized by

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34. These organizations are listed by name in Appendix E.

TABLE IV-19

DISTRIBUTION OF ORGANIZATIONS SPENDING $1 MILLION OR MORE FOR EDUCATION RDD&E, BY SECTOR

	(N)	%
Public - Small	(6)	3
Public - Large	(16)	9
Private	(58)	34
Academic	(92)	53
Total	(172)	100

very small performers. A picture of the organizations by expenditure categories is given in Figure IV-2, with details presented in Table IV-20. Figure IV-3 shows the general picture by staff size, with more specific information given in Table IV-21. Emerging from these data are the following findings:

Over one-third of the organizations (or 663) answering the expenditure item spent less than $50,000 for education RDD&E during their last fiscal year. Even if the small school district organizations and intermediate units (the small public education sector) are removed from consideration, the under $50,000 group still accounts for 32 percent of the remaining organizations.

Tabulated separately by sector, organizations with expenditures under $50,000 comprise half (49%) of the small public education sector, but less than one-tenth (9%) of those in large public education agencies. Over one-third (36%) of the academic performers, and one-quarter (26%) of these in the private sector were in the under $50,000 category.

More than one-quarter (617) of the organizations have no full-time professionals "primarily engaged in education

FIGURE IV-2

PERCENT OF ORGANIZATIONS SPENDING VARIOUS AMOUNTS FOR EDUCATION RDD&E: THE TOTAL GROUP

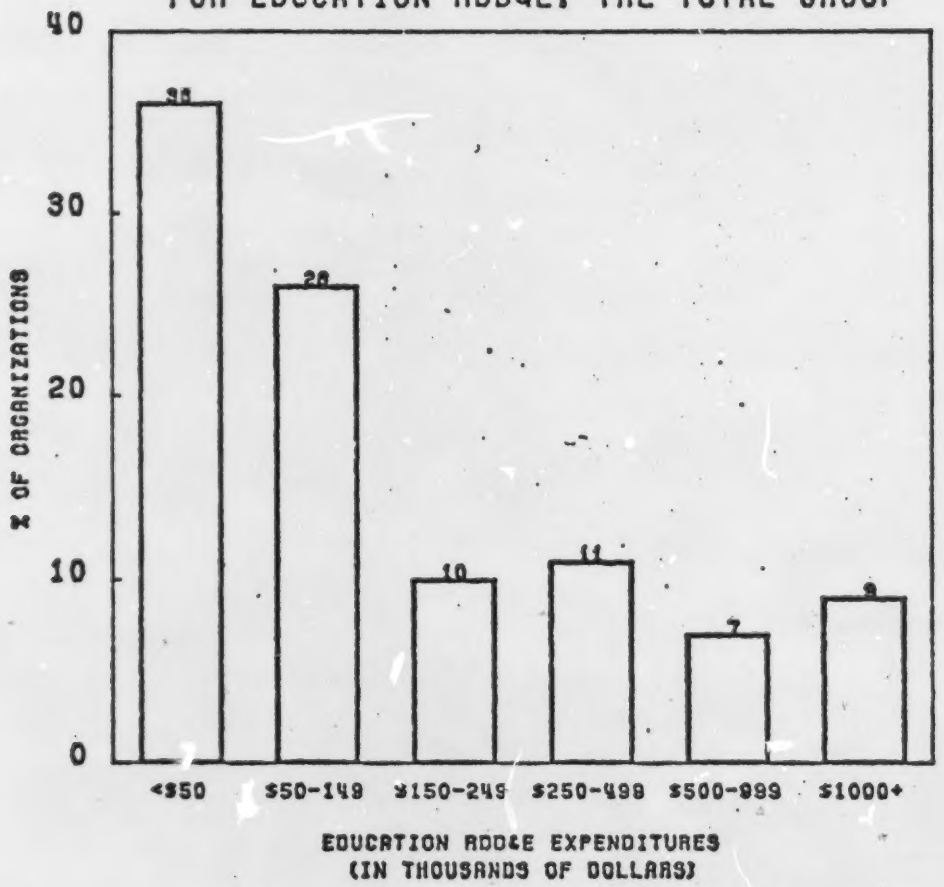

TABLE IV-20

DISTRIBUTION OF ORGANIZATIONS BY AMOUNT SPENT FOR EDUCATION RDD&E, BY SECTOR

Amount Spent	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
$24,000 or less	(143)	32	(7)	6	(62)	18	(238)	25	(450)	24
$25,000 - 49,000	(77)	17	(3)	3	(29)	8	(104)	11	(213)	12
$50,000 - 99,000	(87)	20	(11)	10	(45)	14	(145)	15	(292)	16
$100,000 - 149,000	(42)	9	(11)	10	(32)	9	(105)	11	(190)	10
$150,000 - 249,000	(34)	8	(14)	13	(40)	11	(105)	11	(193)	10
$250,000 - 499,000	(39)	9	(34)	32	(47)	13	(91)	10	(211)	11
$500,000 - 999,000	(36)	4	(11)	10	(37)	10	(63)	7	(127)	7
$1,000,000-2,499,000	(6)	1	(12)	11	(33)	9	(63)	7	(114)	6
$2.5 million and over	(0)	0	(4)	4	(25)	7	(29)	3	(58)	3
Number of Organizations Responding	(444)	100	(107)	100	(354)	100	(943)	100	(1848)	100
Number of Missing Cases	(93)		(44)		(124)		(325)		(586)	
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

FIGURE IV-9

DISTRIBUTION OF ORGANIZATIONS BY SIZE OF FULL-TIME EDUCATION RDD&E STAFF: THE TOTAL GROUP

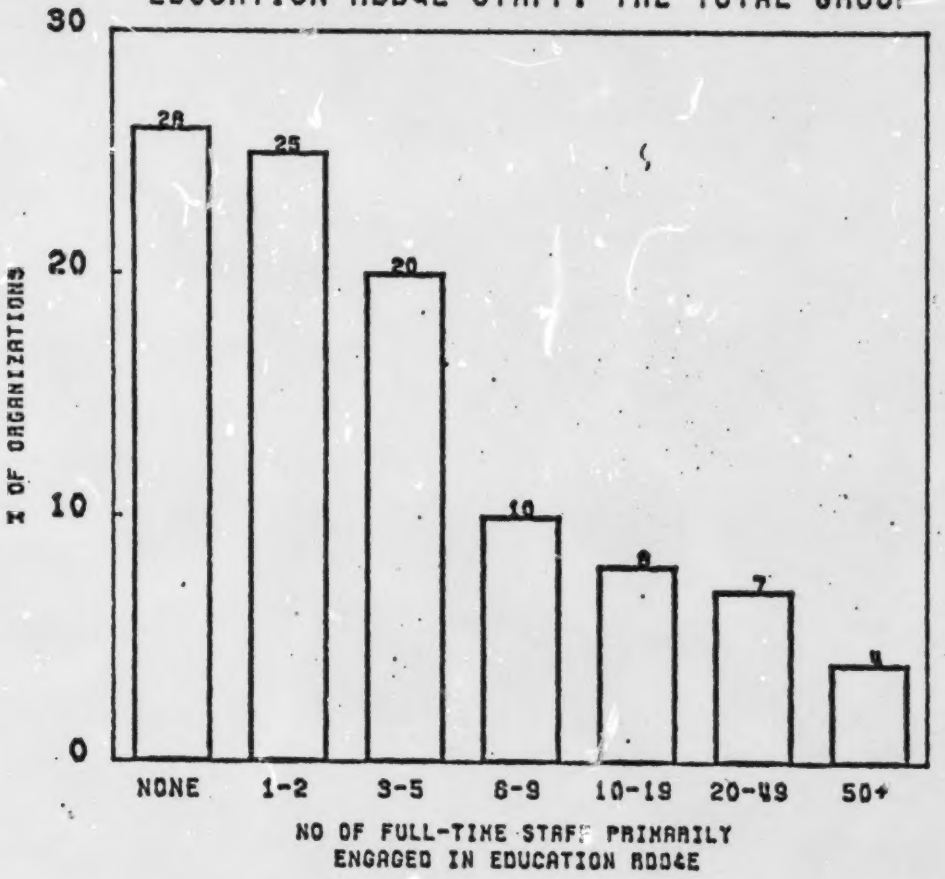

TABLE IV-21

DISTRIBUTION OF ORGANIZATIONS BY SIZE OF FULL-TIME EDUCATION RDD&E STAFF, BY SECTOR

Full-Time Staff Size	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
0	(159)	30	(7)	5	(85)	19	(366)	30	(617)	26
1	(139)	26	(8)	6	(49)	11	(161)	13	(357)	15
2	(73)	14	(7)	5	(39)	9	(123)	10	(242)	10
3 - 5	(87)	16	(42)	32	(104)	23	(224)	18	(457)	20
6 - 9	(29)	6	(28)	22	(55)	12	(115)	9	(227)	10
10 - 19	(19)	4	(18)	14	(37)	8	(109)	9	(183)	8
20 - 49	(18)	3	(17)	13	(44)	10	(77)	6	(156)	7
50 and over	(4)	1	(3)	2	(34)	8	(44)	4	(85)	4
Number of Organizations Responding	(528)	100	(130)	100	(447)	100	(1219)	100	(2324)	100
Number of Missing Cases	(9)		(21)		(31)		(49)		(110)	
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

RDD&E." [35] This is true of 30 percent of the organizations in the small public education sector, nearly one-fifth of the private sector organizations, and 30 percent of the academic sector organizations. An additional 25 percent of the organizations have only one or two full-time education RDD&E staff members.

Eleven percent (241) of the organizations have a full-time education RDD&E staff of 20 or more; 55 of these have staffs of between 50 and 99 members, and 30 have staffs of 100 or more.

3. Primary Mission

Based on their responses to the questionnaire, we have classified our respondents into one of three categories: organizations whose sole or major activity was education RDD&E; those whose sole or major activity was RDD&E not limited to the field of education; and those whose principal field of activity lay outside RDD&E (for example, in health care, instruction, or management consulting).

As shown in Figure IV-4 most of the organizations performing education RDD&E do not specialize in this field. In

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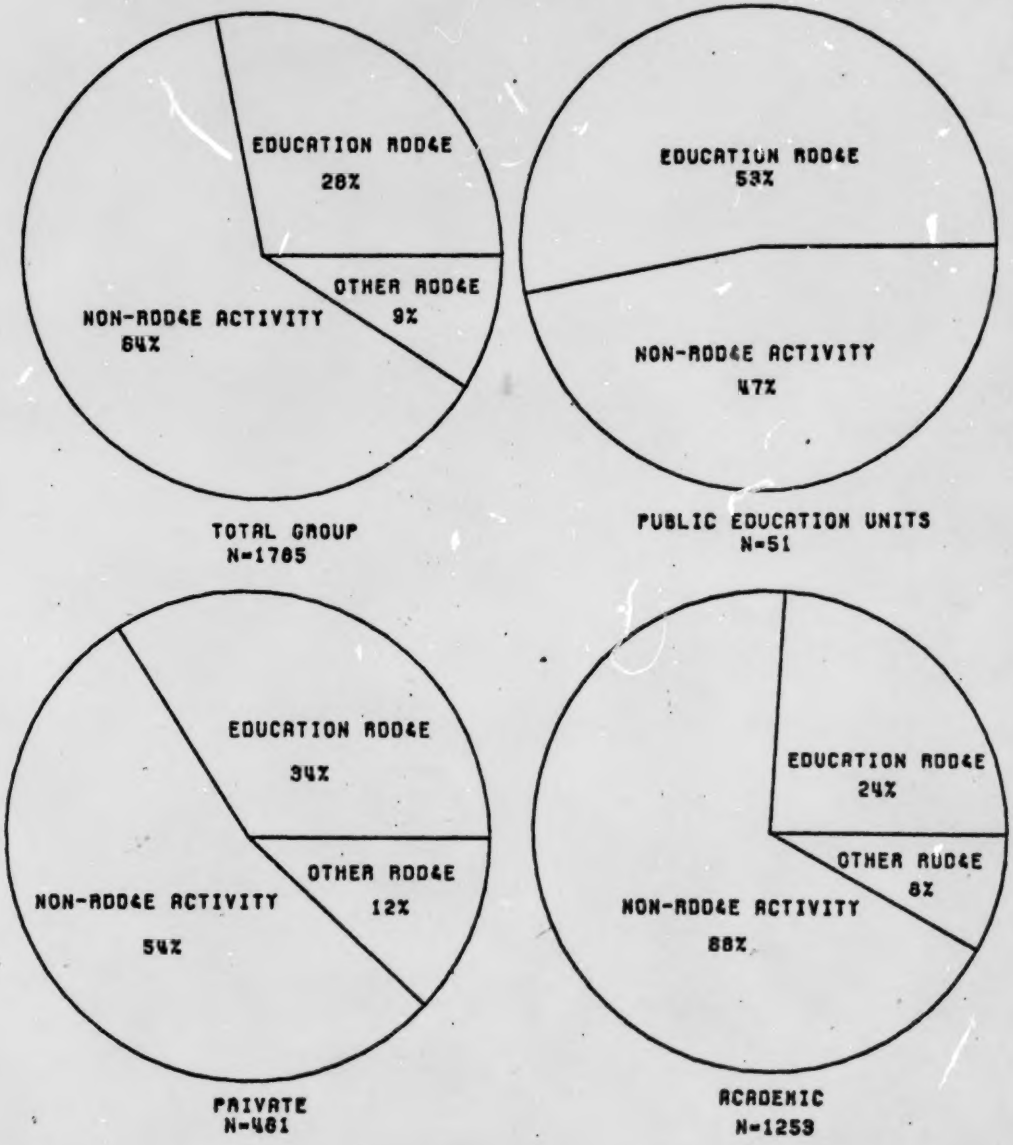
35. Persons "primarily involved in education RDD&E" was defined in the public education and private sectors as persons spending at least 50% of their working hours in education RDD&E activities. In the academic sector the definition was modified to "50% of their nonteaching hours in education RDD&E activities."

PERCENT OF ORGANIZATIONS SPECIALIZING IN VARIOUS ACTIVITIES, BY SECTOR



the academic sector, almost 70 percent of the RDD&E performers do not specialize in any sort of RDD&E activity at all. This is not surprising since the primary "activity" of academic institutions is generally instruction. But about half (54%) of the private sector group is also comprised of organizations specializing in activities other then RDD&E. In the public sectors, the specialty question was asked only of respondents in RDD&E units located in large agencies. This procedure accounts for the small N in that sector.

For the group as a total, the expenditures of those organizations that were classified either as education RDD&E or other RDD&E specialists together account for only about 40 percent of the total amount spent on education RDD&E (Table IV-22). As just explained, this distribution may be somewhat distorted; with the exception of public education sector units completing separate questionnaires, public education agencies were classified as <u>not</u> specializing in RDD&E, although some of their subdivisions certainly <u>do</u> specialize in those activities. But, since the public education sector accounts for only about 15 percent of total expenditures, it can still be said that the bulk of the work (from the point of view of expenditures) is done by organizations which do not specialize in education RDD&E. This finding holds for the universe as a whole as well as within the private and academic sectors, where 43 and 58 percent (respectively) of the total sector expenditures are

TABLE IV-22

AMOUNT AND PERCENT OF TOTAL EDUCATION RDD&E EXPENDITURES ACCOUNTED FOR BY (EDUCATION) RDD&E SPECIALISTS VS. NONSPECIALISTS, TOTAL GROUP

Organizational Specialty	(N)	Aggregate Amount Spent for Education RDD&E	Percent of Total Education RDD&E Expenditures
Education RDD&E	(390)	$233,603,000	32
Other RDD&E	(118)	62,189,000	8
Non-RDD&E Activity[a]	(1320)	427,519,000	58
No Answer	(20)	11,573,000	2
Total	(1848)	$734,884,000	100

Missing Cases = 586

[a]Only organizations within large public education agencies (i.e. SEAs and LEAs above 50,000 enrollment) were asked the "specialty" question, since it was assumed that the principal activity of education agencies is not RDD&E, but rather instruction or technical assistance. Therefore, all public education organizations not asked the specialty question are subsumed under the "non-RDD&E activity" category.

concentrated in organizations specializing in an activity other than RDD&E (Table IV-23).

The specialties of the major performers (those whose funding volume exceeded $1 million) are shown in Table IV-24. Comparing the information in that table to data presented in Figure IV-4 we see that a substantially higher proportion of $1 million-plus private sector performers (46%) specialize in education RDD&E than do private sector organizations in general (34%). In the academic sector, however, the $1 million-plus organizations are only slightly more likely than the sector as a whole to report education RDD&E as their major or sole activity (29% vs. 24%).

4. Geographic Distribution

The geographic distribution of the organizations is shown in Figure IV-5. Appendix F shows the number of organizations within each state by sector.

Looking at the group as a whole, the greatest concentration of organizations is in New York and California, each of which has in excess of 200 organizations. These states are followed by Ohio, Illinois, Texas, and Pennsylvania, each of which has between 100 and 199 organizations.

Examining these results by sector, it can be seen that the greatest concentration of public education agencies performing education RDD&E is in California, New York and Ohio, with 94, 58

TABLE IV-23

CONCENTRATION OF EXPENDITURES AMONG ORGANIZATIONS SPECIALIZING IN RDD&E VS. OTHERS, PRIVATE AND ACADEMIC SECTORS

Sector	(N)	Aggregate Amount Spent for Education RDD&E	Percent of Total Sector Expenditures
Private			
Education RDD&E Specialists	(122)	$106,348,000	44%
Other RDD&E Specialists	(38)	28,203,000	12%
Non-RDD&E Activity	(182)	103,991,000	43%
Specialty Not Determined	(12)	3,731,000	2%
Total Sector Expenditures		$242,273,000	100%
Academic			
Education RDD&E Specialists	(245)	$114,657,000	31%
Other RDD&E Specialists	(80)	33,986,000	9%
Non-RDD&E Activity	(610)	217,138,000	58%
Specialty Not Determined	(8)	7,842,000	2%
Total Sector Expenditures		$373,623,000	100%

Missing Cases = 449

TABLE IV-24

SPECIALTIES OF ORGANIZATIONS SPENDING $1 MILLION OR MORE FOR EDUCATION RDD&E

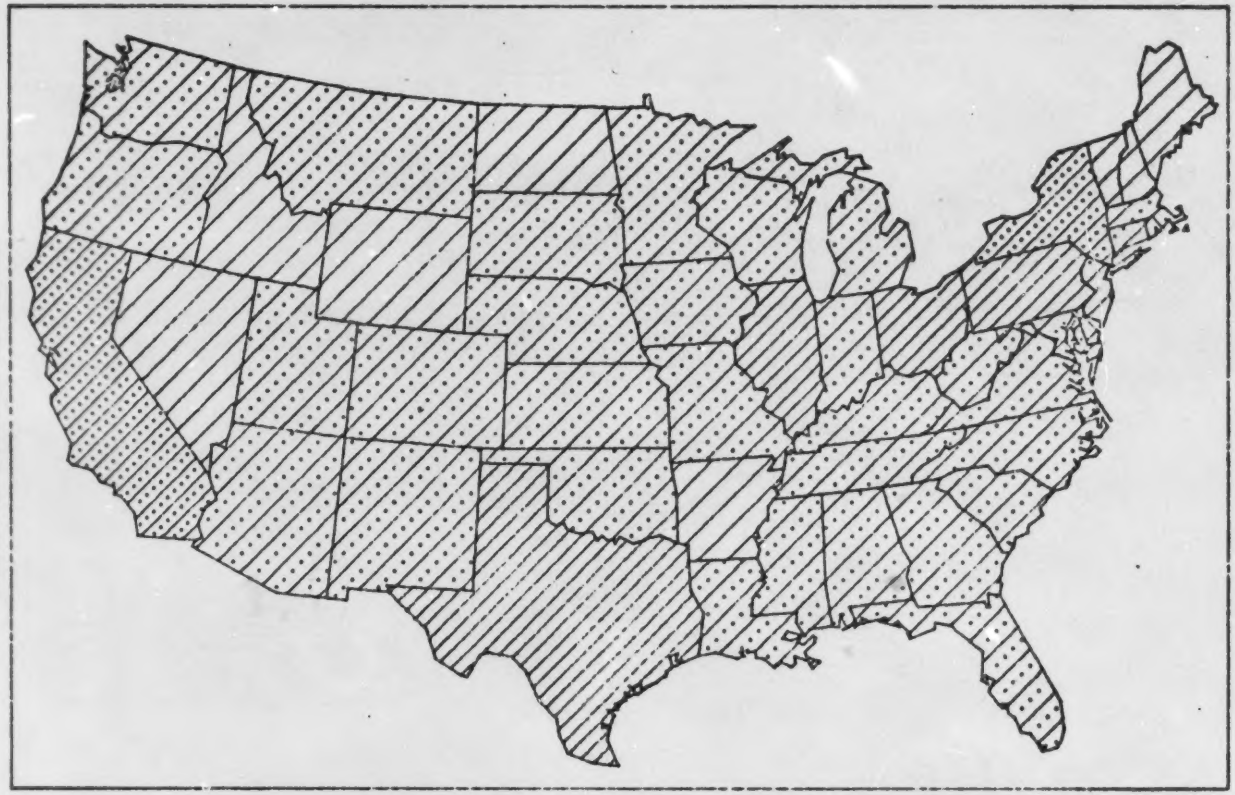
Specialty	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Education RDD&E	(0)	0	(2)	12	(26)	46	(26)	29	(54)	32
Other RDD&E	(0)	0	(0)	0	(9)	16	(9)	10	(18)	11
Non-RDD&E Activity[a]	(6)	100	(14)	88	(22)	39	(54)	61	(96)	57
Total	(6)	100	(16)	100	(57)	100	(89)	100	(168)	100

Missing Cases = 4

[a]Except for divisions of public education agencies responding to the "specialty question," all public education organizations were automatically classified as not specializing in RDD&E.

FIGURE IV-5

THE GEOGRAPHIC DISTRIBUTION OF EDUCATION RDD&E ORGANIZATIONS
IN THE CONTINENTAL UNITED STATES



NOTE: Geographic distribution by sector is shown in Appendix F.

and 48 agencies, respectively. This distribution is, of course, in part a function of the population of each of these states, but it also reflects the way in which public education is organized within them.

Since it is less dependent upon population, the distribution of organizations in the private and academic sectors is perhaps more interesting. In the private sector, New York, Washington, D.C. and California reign supreme, with 78, 64 and 50 organizations respectively. New York and California also lead the states in the academic sector, with 130 and 93 organizations, followed by Ohio with 80.

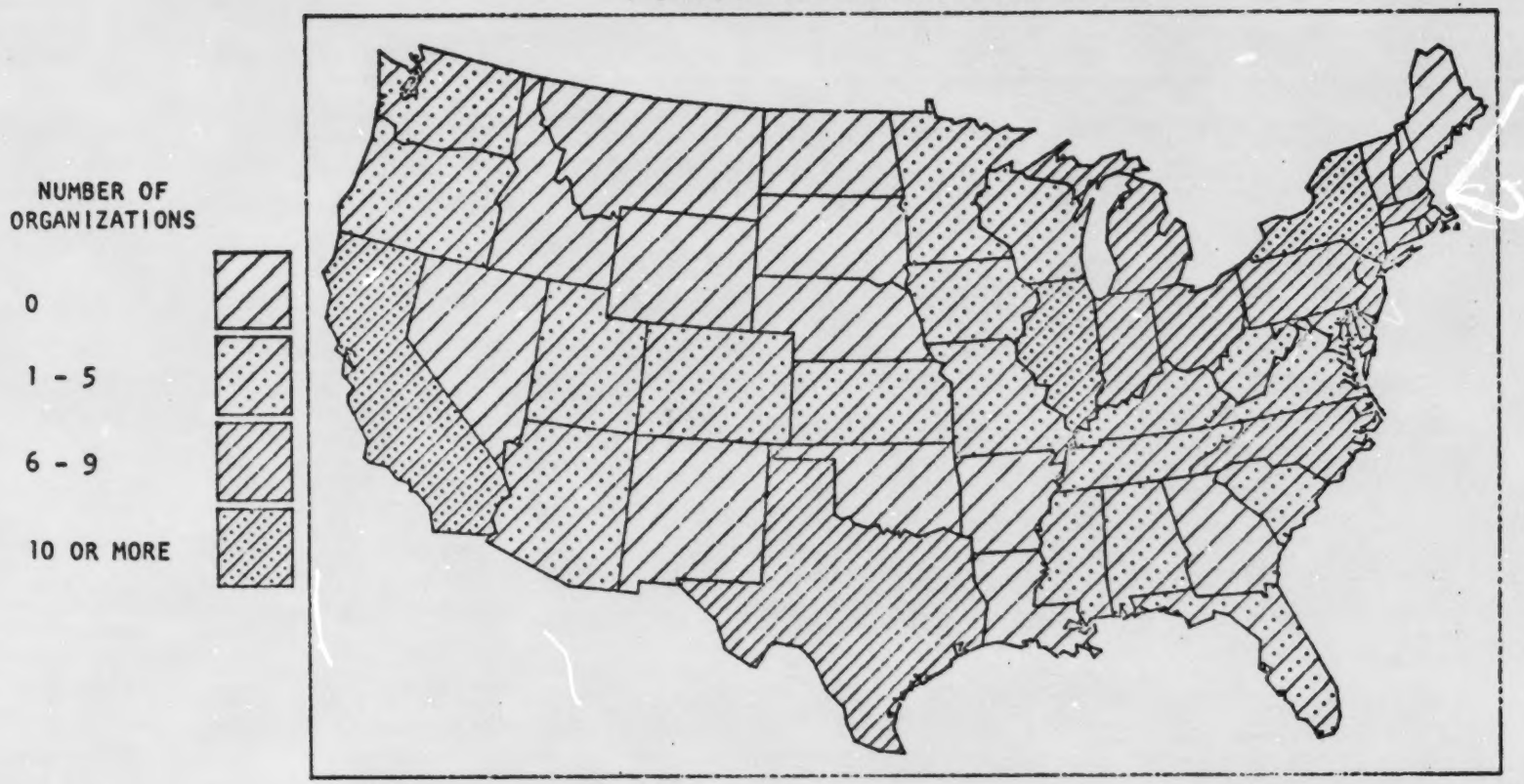
The location of the 172 $1 million-plus organizations is shown in Figure IV-6. Six states (New York, New Jersey, Oregon, Pennsylvania, South Carolina, and Texas) have two public education organizations in that category. The greatest concentration of $1 million-plus private sector organizations is in Washington, D.C. (13), New York (6) and California (5). Over one-third of the large academic education RDD&E performers are clustered in California (10), New York (9), Illinois (9) and Texas (6).

5. Age

The organizations as a whole are young, with 40 percent organized--as they exist in their present form--during the last ten years, and an additional 29 percent organized during 1959-1968 (Table IV-25). However, only 55 percent of the group are

FIGURE IV-6

GEOGRAPHIC DISTRIBUTION OF ORGANIZATIONS SPENDING
$1,000,000 OR MORE FOR EDUCATION RDD&E



Total N = 172

Sector Breakdown (State and Number of Organizations)

Public Education		Private		Academic	
New York	(2)	Washington, D.C.	(13)	California	(10)
New Jersey	(2)	New York	(6)	Illinois	(9)
Oregon	(2)	California	(5)	New York	(9)
Pennsylvania	(2)			Texas	(6)
South Carolina	(2)				
Texas	(2)				

TABLE IV-25

DISTRIBUTION OF ORGANIZATIONS BY YEAR FOUNDED, BY SECTOR

Year Founded	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
1938 or earlier	(2)	-[a]	(1)	2	(65)	14	(205)	18	(273)	17
1939 - 1958	(2)	-	(1)	2	(68)	15	(156)	14	(227)	14
1959 - 1968	(2)	-	(10)	25	(133)	29	(334)	30	(479)	29
1969 - 1973	(3)	-	(13)	32	(150)	33	(288)	25	(454)	28
1974 - 1978	(0)	-	(15)	38	(37)	8	(150)	13	(202)	12
Number of Organizations Responding	(9)[b]	100	(40)[b]	100	(453)	100	(1133)	100	(1635)	100
Number of Missing Cases	(528)		(111)		(25)		(135)		(799)	
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

[a]Percents not given because N is very small.

[b]In the public education sectors, this question was asked only of R&D&E performing units, which accounts for the small Ns.

entirely new organizations; the rest were formed from predecessors, by merger, division, etc.

Looking at the sectors individually, the public education RDD&E organizations in large agencies stand out as especially young; 38 percent were organized during the last four years, but, again, 69 percent of these had some predecessor. In contrast, the academic organizations are the oldest of the group, with 18 percent founded more than 40 years ago.

It is important to note, however, that the age of the organizations as reported in the public education and academic sectors is, to a considerable degree, affected by the "level" of the reporting organization. Reports for an entire agency, university, or college are likely to show earlier founding dates than those for any specialized subdivisions of such institutions.

D. Summary

This chapter has presented an overview of education RDD&E performers at three levels of detail: the sector level, the institutional level, and the organizational level.

Sector Analysis

Fully one-half of the education RDD&E resources identified by ARROE--i.e., expenditures of $735,000,000 and 22,000 full-time professional staff members--are located in the academic sector. One-third of the resources are located in the private sector, and only about 15 percent in the public education sectors.

Institutional Analysis

ARROE identified approximately 2,400 organizations that conduct education RDD&E activities. These organizations are located in 37 state education agencies, 193 intermediate service agencies, 401 local education agencies, 423 colleges and universities, and 476 institutions of other types. However, only in the public education and academic sectors were several organizations located at the same institution; therefore, the "institutional analysis" was limited to these sectors.

Public Education Agencies typically allocate a minimum of resources for carrying out education RDD&E work. Specifically:

- Over one-half of the 37 state education agencies in the ARROE data base spent less than $500,000 and nearly three-quarters less than $1,000,000 for this type of work during their last completed fiscal year. Nearly one-half reported employing 10 or fewer professionals with primary responsibility in this area, although one-third of the agencies have 20 or more of these employees.

- Similarly, over one-half of the intermediate service agencies spent less than $50,000 and over two-thirds less than $150,000 on RDD&E activities. Nearly one-half employed either none or only one full-time professional for RDD&E work, and over three-quarters had less than six such employees.

- Finally, nearly two-thirds of the local education agencies reported education RDD&E expenditures of under $100,000 and over 90 percent reported expenditures of under $500,000. Half employed either none or only one full-time RDD&E professional, and over 90 percent had less than 10 such employees.

- On the other hand, 9 state education agencies (28% of the total group) reported education RDD&E expenditures of $1 million or more. Fourteen intermediate service agencies and 19 local education agencies with expenditures of $500,000 or more were also identified.

The majority of academic institutions indicated minimum expenditures for education RDD&E, with more than one-half (55%) spending less than $250,000 for these activities. However, 83 institutions--nearly one-quarter of the group--reported expenditures of $1,000,000 or more.

Organizational Analysis

ARROE's most detailed information is available for the individual units or "organizations" identified as education RDD&E performers. The data presented so far suggest that the

universe of these agencies is:

- large--2,434 active organizations were identified;
- dominated--in terms of number--by small organizations, i.e., those with education RDD&E expenditures below $150,000 and fewer than two full-time professionals with primary responsibility for education RDD&E;
- dominated--in terms of expenditures--by the 172 largest performers, which, although they constitute only seven percent of the universe, account for nearly 70 percent of all expenditures;
- diverse--with the primary mission of a majority of organizations lying outside the research field;
- dispersed throughout the nation--but with large concentrations in New York, California, Ohio, Illinois, Texas, Pennsylvania, and Washington, D.C.; and
- young--with 40 percent of the organizations created during the last ten years.

V. FINDINGS: PART THREE
A CLOSER LOOK AT SELECTED FEATURES OF THE UNIVERSE

This chapter examines in greater depth topics which were briefly touched upon in the proceeding section. Activities of performing organizations, funding patterns, staffing patterns, and education RDD&E projects are described.

A. Primary Activities Of Education RDD&E Performers

As was shown in some detail in Chapter IV, organizations which can be described as non-RDD&E specialists are very important among performers, comprising over 60 percent of the total group and accounting for over one-half (58%) of the money spent on education RDD&E during the time period for which these data were gathered. In this section, the specific kinds of activities in which these organizations do specialize are examined. The general picture is presented in Figure V-1, with details given in Appendix C. [36]

Principal activities of nonspecialists in the private sector include a wide range of functions, and no one activity stands out as a primary mission of the majority of the group.

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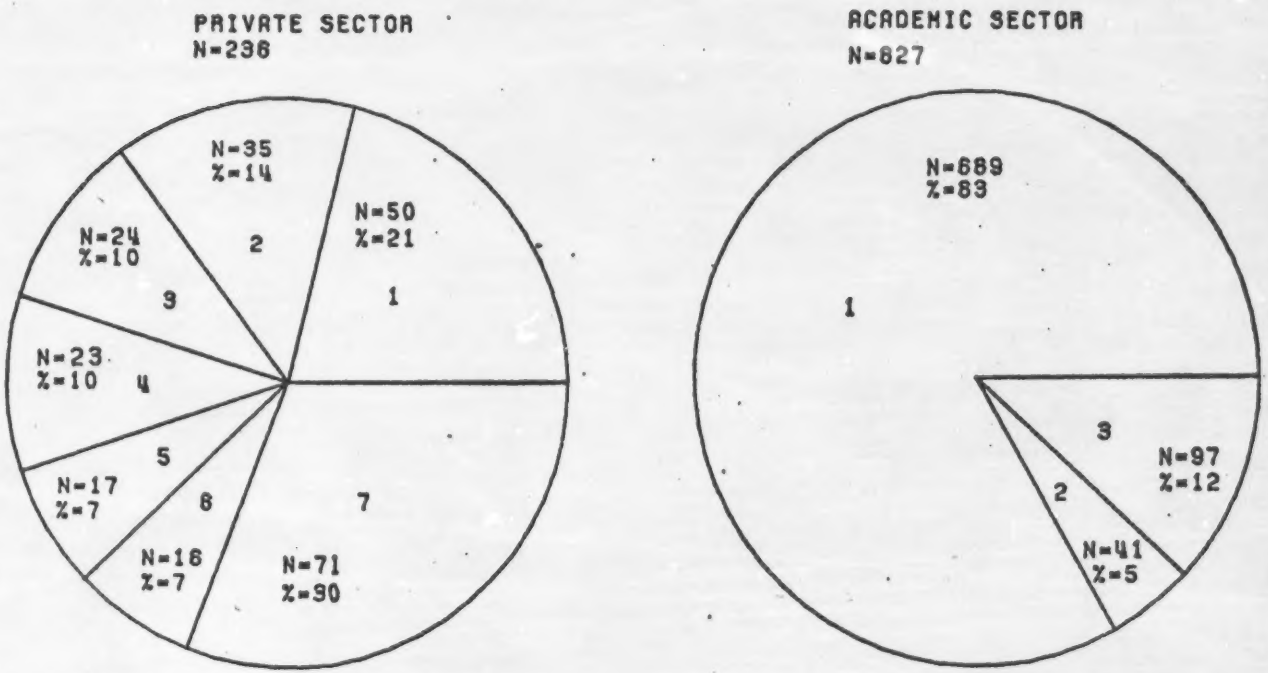
36. No data for public education agencies are included in Figure V-1 or in the appendix, since with a majority of cases this question was not applicable.

FIGURE V-1

PRINCIPAL ACTIVITIES OF ORGANIZATIONS NOT SPECIALIZING IN R&D&E, PRIVATE AND ACADEMIC SECTORS



1 HEALTH CARE
2 ASSOCIATION, LABOR UNION
3 PRIVATE SCHOOL
4 GOVT BODY
5 SOCIAL SERVICES
6 CHILD CARE
7 OTHER

1 INSTRUCTION
2 ADMINISTRATION
3 OTHER

THIS CHART LISTS SEPARATELY ONLY CATEGORIES NAMED BY 5% OR MORE OF RESPONDENTS.

Twenty-one percent of the institutions specialize in health care, 14 percent are civic, professional, or trade associations, or labor unions, 10 percent are governmental agencies, 7 percent are involved in child care, and 7 percent in social services. The remaining organizations--30 percent-- specialize in a variety of other activities, such as publishing, management consulting, information services, and advertising, none of which, however, accounts for as much as 5 percent of the private sector group.

In the academic sector the picture is quite different; over 80 percent of the non-RDD&E specialists focus on a single activity: instruction. This finding may indicate that individual faculty members who include teaching among their responsibilities still play an important part in education RDD&E efforts. On the other hand we cannot rule out the possibility that, while the academic "organizations" reporting to ARROE were often schools and departments whose primary activity is teaching, RDD&E activities may be performed by specialized units within these, rather than by teaching staff.

Principal activities of the $1 million-plus organizations not specializing in RDD&E are similar to those just described for nonspecialists in general. In the academic sector, nearly 90 percent focus on instruction. As shown in Table V-1, the large private sector organizations are engaged in a variety of

TABLE V-1

PRINCIPAL ACTIVITIES OF $1 MILLION-PLUS PRIVATE SECTOR ORGANIZATIONS THAT DO NOT SPECIALIZE IN RDD&E

Activity	(N)	%
Health Care	(3)	15
Association	(3)	15
Governmental Body	(2)	10
Publishing, Broadcasting	(2)	10
Management Consulting	(2)	10
Information Services	(2)	10
Other	(6)	30
Number of Organizations Responding	(20)	100
Number of Missing Cases	(2)	

service-oriented activities, such as health care, government, management consulting and information services.

B. Funding Patterns

1. Dollar Volume Of Performer Activity

As noted earlier, the responding organizations reported spending a total of $734,884,000 on education RDD&E activities during their most recently completed fiscal year. (For 87% of the respondents, this was in FY 1977.) However, this figure should not be accepted as an estimate of total RDD&E expenditures of performing organizations because of several factors:

While our list-building effort attempted to identify the universe of education RDD&E performers, there can be no doubt that an unknown portion of the universe was not located.

The eligibility status of approximately 20 percent of the organizations identified as potential respondents was not fully established when the data collection efforts were cut off.

Twenty-four percent of the respondents did not answer the funding question, including 26 percent of private and

academic sector respondents, with consequent underreporting in those sectors.

Because of the data collection procedures used in the public education sector, expenditures for activities performed outside of readily identifiable RDD&E units may have been missed, suggesting underreporting in that sector as well.

Because the present study is the first one of its kind, and because comparable data on RDD&E expenditures in the field of education have never been assembled, we have no reliable way of assessing the "reasonableness" of the figures yielded by our survey. However, we are in a position to make some rough comparisons with other data sources for one class of data--figures reported for the expenditure of Federal funds.

The 1977 NSF Analysis of Federal R&D Funding provides an estimate of the obligations incurred during FY 1977 by the Federal government for education research and development (but excluding evaluation, policy studies and organized dissemination activities relate to R&D.) The NSF estimate--$284 million--includes all such obligations incurred by NIE, as well as obligations incurred by the Office of Education, several other parts of HEW, and by NSF for educational research and

development. [37] For comparability with ARROE, an estimated $19,000,000 in obligations incurred by the Employment and Training Administration (DOL) for its R&D activities, and $27,000,000 incurred by the Office of Human Development for child abuse and child development R&D programs must be added, since these activities fit the definitions of education R&D used by ARROE. However, NSF excludes funding provided for education R&D activities by organizations such as the Department of Agriculture, the National Center for Education Statistics, the National Endowment for the Arts, and the National Institute for Child Health and Development. NIE has estimated that, in 1973, obligations from agencies not included in the NSF data base totalled $76,000,000.

More recent data, developed by NIE on the basis of information from the National Research Council's Study Project on Social Research and Development, are not directly comparable with ARROE data, since these figures include expenditures for work performed within Federal agencies as well as work performed by outside agencies. NIE shows a figure of $452 million for all

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37. Included in the NSF estimate are programs of NIE, the Health Resources Administration (HEW) and the Office of the Assistant Secretary for Education; vocational education programs for curriculum development, research and innovation, grants to states and special projects (OE); Education for the Handicapped (OE); Head Start (OE) and Institutional Science and Science Education Programs (NSF). Source: An Analysis of Federal R&D Funding by Function. Surveys of Science Resource Series. NSF, 1977.

Federal obligations for educational knowledge production and utilization in Fiscal 1975. [38]

Data on sources of funding are only available for those organizations in our study from which we received a mail questionnaire; as previously discussed, approximately 40 percent of our responses fall into that category. As shown in Table V-2 the 887 organizations which provided the more detailed funding data received approximately $400 million in total education RDD&E funding. On the basis of their reports, we aggregated the sums attributable to various sources of funding and found that those organizations from which we have detailed data received from Federal sources approximately $210 million or 53 percent of all their funding. Although we have only made very rough comparisons between the characteristics of mail and telephone respondents to the ARROE survey, we are inclined to believe that the mail respondents reported a higher level of RDD&E funding and had therefore perhaps a higher level of Federal support. (See Chapter III.) Thus the following comparisons of estimates of Federally-supported education RDD&E might be made:

- FY 77 NSF estimate: $330 million (excludes dissemination)
- FY 1977 NSF plus funding by agencies not included in NSF report: $406 million

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38. Op cit.

TABLE V-2

EDUCATION RDD&E FUNDS REPORTED RECEIVED FROM VARIOUS SOURCES, BY SECTOR

Source	Sector								TOTAL	
	Public - Small (N)	%	Public - Large (N)	%	Private (N)	%	Academic (N)	%	(N)	%
Federal Government	($ 8,266,000)	32	($29,251,000)	52	($ 84,901,000)	62	($ 87,092,000)	48	($209,510,000)	53
State Government	(7,103,000)	28	(21,226,000)	38	(11,706,000)	8	(33,192,000)	18	(73,226,000)	18
Local Government	(5,287,000)	21	(4,195,000)	7	(3,415,000)	2	(2,361,000)	1	(15,257,000)	4
Private Industry	(82,000)	0	(0)	0	(1,703,000)	1	(3,535,000)	2	(5,320,000)	1
Association.	(188,000)	1	(68,000)	0	(8,967,000)	7	(10,971,000)	6	(20,195,000)	5
Own Funds.	(4,095,000)	16	(1,464,000)	3	(19,309,000)	14	(38,255,000)	21	(63,123,000)	16
Other Source	(550,000)	2	(37,000)	0	(6,702,000)	5	(4,649,000)	3	(11,939,000)	3
Total Funds Reported Received	($25,571,000)	100	($56,241,000)	100	($136,703,000)	100	($180,055,000)	100	($398,570,000)	100
Number of Organizations Responding[a]	(170-173)		(72-73)		(147-156)		(483-487)		(872-887)	
Number of Missing Cases	(12-15)		(37-38)		(38-47)		(95-99)		(182-199)	
Total (N)[b]	(185)		(110)		(194)		(582)		(1363)	

[a]On this table and on subsequent similar tables, the number of organizations responding varies slightly from source to source, since each constituted a separate question on the mail instrument.

[b]Since this table is based on mail questionnaire data, the total N represents only organizations answering by mail.

- FY 75 NIE estimate (based on NAS data, as modified by NIE): $452 (includes in-house Federal expenditures)

- FY 77 ARROE estimate for that 75 percent of responding organizations from which financial data were received: $368 million (50 percent of a total of $735 million in funds received from all sources).

2. Sources Of Funding

Just as it is impossible to state precisely how much money is spent on education RDD&E by RDD&E performers, it is also difficult to assess accurately the contribution of various funding sources to the total effort. Perhaps the best that can be done is to determine the relative importance of these sponsors in the various sectors, and among different types of organizations.

To gather this information, we asked respondents to indicate the percentage of their organization's education RDD&E expenditures received from the following sources:[39]

1. THE FEDERAL GOVERNMENT-Expenditures made from this source had to be identifiable as Federally supported. Both general (nontargetted) and categorical (targetted) support

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39. The definitions shown were not included in the mail instrument, but were used over the phone in response to calls requesting classification of the terms.

were to be included. (State education agencies were asked to exclude Federal flow-through funds from this category.)

2. THE STATE GOVERNMENT-Expenditures made from this source had to be identifiable as state supported. Revenues that a state education agency generated through its taxing powers were to be allocated to this category.

3. LOCAL GOVERNMENT-Included revenue provided by counties, municipalities, and their agencies. Expenditures from this source had to be identifiable as locally supported. Revenues generated by local education agencies through their taxing powers were to be allocated to this source.

4. PRIVATE INDUSTRY.

5. NONPROFIT ASSOCIATIONS OR FOUNDATIONS.

6. "OWN FUNDS"--This term was defined slightly differently for each sector as follows:

a. Public Education Sectors--Revenue generated by the agency through sales, rentals, interest from investments, admissions, fees, and similar activities. Included also private gifts and endowments that did not come from associations or foundations.

b. Private Sector--RDD&E sponsored by the organization (i.e., paid for out of its overhead, profits, unrelated income, or nonassociation/foundation endowments).

c. Academic Sector--Revenue generated by tuition and fees assessed against students for education and

general purposes. Included also private gifts and endowments that did not come from associations or foundations.

The relative importance of these sources within each sector is shown in Tables V-2 and V-3. Table V-2 (presented earlier on p. 103) shows for those organizations that provided mail questionnaire data, the overall distribution of funds from various sources, separately for each sector. Thus, the Federal government supplied 53 percent of all funds spent, but the proportion was higher for the private sector (62 %). Only 16 percent of all funds were generated by the performing organizations themselves, rather than by outside sources, but the proportion was much higher in the academic sector, where 21 percent of the work was self-financed, as against 14 percent in the private sector.

Table V-3 focuses on the extent to which individual organizations were recipients of funds from each of these sources. [40] It presents, for each sector, the percentage of support received from each source by reporting organizations

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40. To reiterate, the term "organization" refers to the unit described on each individual questionnaire. The distinction between "organizations" and "agency" is important in the large public education sector, where the 151 organizations are in fact located in 97 different agencies. Similarly, the 1,268 academic organizations are located in 423 different colleges and universities. However, in the small public education and private sectors, the terms "organizations" and "agency" or "institution" are, for all practical purposes, synonymous, since, with few exceptions, each organization was located at a different institution.

TABLE V-3

PERCENTAGE OF EDUCATION RDD&E FUNDS RECEIVED FROM VARIOUS SOURCES, BY SECTOR

Source	Sector											
	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Federal Government. .	0	10	45	17	45	75	10	60	95	0	20	70
State Government. . .	0	15	40	5	26	55	0	0	5	0	0	30
Local Government. . .	0	1	50	0.	0	21	0	0	0	0	0	0
Private Industry. . .	0	0	0	0	0	0	0	0	0	0	0	0
Association, Foundations	0	0	0	0	0	0	0	0	10	0	0	2
Own Funds	0	0	20	0	0	0	0	0	10	0	10	67
Other	0	0	30	0	0	0	0	0	0	0	0	0
Number of Organizations Responding	(173-177)			(80-82)			(161-171)			(526-531)		
Number of Missing Cases	(8-12)			(28-30)			(23-33)			(51-56)		
Total (N)[a]	(185)			(110)			(194)			(582)		

[a]Mail questionnaire respondents only.

that are at the first quartile, second quartile (or median) and third quartile of each distribution. [41] The following patterns are evident:

- In the large public education sector (i.e., organizations located in state education agencies and local education agencies whose enrollment is 50,000 or greater), the Federal and state governments are frequently the most important sources of revenue for education RDD&E activities, not only in terms of total funding, but also with respect to the number of organizations receiving major support from these two sources.

- The Federal and state governments again emerge as important funding sources among the smaller public education agencies--intermediate service agencies (ISAs and small LEAs). Local governments, however, are also important funders of a sizeable number of these smaller agencies, with about one-quarter of them receiving at least 50 percent of their funding from that source. A quarter of the group also reported using their "own funds" for 20 percent of their expenditures or more. Possibly, however, some of these agencies entered funds generated through their own taxing

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41. The first quartile is that point in the frequency distribution at or below which 25 percent of the group falls; the median is the point at or below which 50 percent of the group falls; and the third quartile is the point at or below which 75 percent of the group falls.

powers in the "own funds" category of the questionnaire, rather than, as we had intended, in the "local government" category.

- In the private sector, the heavy dependence upon Federal funds stands out most clearly. Half of all organizations derived 60 percent or more, and a quarter 95 percent or more of their education RDD&E funds from this source. No other source of income provides major funding for a sizable portion of this group.

- Although Federal funding is somewhat less dominant in the academic sector, a sizable minority do receive much of their funding from that source. Internal funds are also an important funding source for at least one-quarter of the organizations.

- Foundations play no role in assuming the viability of organizations in any sector.

Although the data shown in Tables V-2 and V-3 unmistakably point to concentrations of funding sources by sector, it is worth noting that the system is far from airtight. The public education and academic sectors in particular absorb funds from a variety of sources. But the Federal government is clearly a dominant funding source for organizations in all sectors. For

this reason, some supplementary data about the distribution of Federal funds are presented.

3. The Distribution Of Federal RDD&E Funds

As previously shown, those RDD&E performers who supplied detailed information reported having received $210 million from the Federal government. Table V-4 shows the overall distribution of funds among organizations which specialize in education vs. those not so specialized, as well as distributions for $1 million-plus vs. other performers.

Overall, the largest recipients of Federal funds were academic institutions, in particular, those organizations not specializing in RDD&E activities. In the private sector, on the other hand, the largest sums went to $1 million-plus organizations specializing in education RDD&E. In the public education sector, the picture is quite different for ISAs and small LEAs than for SEAs and large LEAs. Among the former, funds were apparently widely distributed to a number of recipients of relatively small grants (average organizational funding was $38,000). In the state education agencies and large LEAs, funds were more concentrated, with a few organizations (N=14) whose RDD&E expenditures were 1 million dollars or more receiving 75 percent of all Federal funds going to such agencies.

Tables V-5 and V-6 use these same data to describe organizational characteristics, trying to show the extent to

TABLE V-4

EDUCATION RDD&E FUNDS REPORTED RECEIVED FROM THE FEDERAL GOVERNMENT, BY ORGANIZATIONAL SECTOR, SIZE, SPECIALTY

Sector	(N)	Dollars	Percent
Small Public Education			
$1 Million-Plus Organizations	(3)	$ 1,770,000	0
Other Organizations	(169)	6,496,000	3
Total Sector	(172)	8,266,000	
Large Public Education			
$1 Million-Plus Organizations	(14)	22,045,000	
Education RDD&E Organizations	(2)	5,394,000	3
Non-RDD&E Organizations	(12)	16,651,000	8
Other Organizations	(59)	7,206,000	
Education RDD&E Organizations	(14)	1,483,000	0
Non-RDD&E Organizations	(45)	5,723,000	3
Total Sector	(73)	29,251,000	
Academic			
$1 Million-Plus Organizations	(45)	60,418,000	
Education RDD&E Organizations	(14)	18,564,000	9
Other RDD&E Organizations	(3)	4,576,000	2
Non-RDD&E Organizations	(27)	37,278,000	18
Specialty Not Determined	(1)	0	0
Other Organizations	(442)	26,674,000	
Education RDD&E Organizations	(119)	8,194,000	4
Other RDD&E Organizations	(30)	949,000	0
Non-RDD&E Organizations	(291)	17,351,000	8
Specialty Not Determined	(2)	180,000	0
Total Sector	(487)	87,092,000	
Private			
$1 Million-Plus Organizations	(31)	69,681,000	
Education RDD&E Organizations	(17)	43,034,000	20
Other RDD&E Organizations	(6)	13,900,000	7
Non-RDD&E Organizations	(8)	12,747,000	6
Other Organizations	(123)	15,220,000	
Education RDD&E Organizations	(40)	5,243,000	3
Other RDD&E Organizations	(16)	3,519,000	2
Non-RDD&E Organizations	(65)	5,945,000	3
Specialty Not Determined	(2)	513,000	0
Total Sector	(154)	84,901,000	
Total Group	(886)	$209,510,000	100
Missing Cases	(185)		
Total (N)[a]	(1071)		

[a]Mail questionnaire respondents only.

TABLE V-5

PERCENTAGE OF EDUCATION RDD&E FUNDS RECEIVED FROM VARIOUS SOURCES BY $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

Source	Sector								
	Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Federal Government	43	85	100	20	75	90	35	58	84
State Government	0	6	51	0	2	13	0	10	32
Local Government	0	0	0	0	0	5	0	0	0
Private Industry	0	0	0	0	0	2	0	0	0
Associations, Foundations	0	0	0	0	1	10	0	0	6
Own Funds	0	0	0	0	0	8	0	5	12
Other	0	0	0	0	0	4	0	0	0
Number of Organizations Responding	(14)			(31-32)			(45)		
Number of Missing Cases	(0)			(1-2)			(1)		
Total (N)[a]	(14)			(33)			(46)		

[a]Mail questionnaire respondents only. Does not include small public education sector, since N for that group was only 3.

TABLE V-6

PERCENTAGE OF EDUCATION RDD&E FUNDS RECEIVED FROM VARIOUS SOURCES BY EDUCATION RDD&E AND OTHER RDD&E SPECIALISTS, PRIVATE AND ACADEMIC SECTORS

Source	Private Sector									Academic Sector								
	Education RDD&E Specialists			Other RDD&E Specialists			All Others			Education RDD&E Specialists			Other RDD&E Specialists			All Others		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Federal Government	10	55	90	33	95	100	2	50	95	0	15	70	0	30	71	0	25	70
State Government	0	0	10	0	0	5	0	0	4	0	0	25	0	0	32	0	0	30
Local Government	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Associations, Foundations	0	0	15	0	0	5	0	0	10	0	0	4	0	0	5	0	0	0
Own Funds	0	0	5	0	0	2	0	1	26	0	10	70	0	7	60	0	10	61
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Organizations Responding	(60-63)			(21-23)			(79-82)			(146-147)			(34-35)			(341-342)		
Number of Missing Cases	(5-8)			(3-5)			(12-15)			(6-7)			(3-4)			(40-41)		
Total (N)[a]	(68)			(26)			(94)			(153)			(38)			(382)		

[a]Mail questionnaire respondents only.

which Federal funds play an important role in the funding picture of the various organizations which responded to this survey. Table V-5 shows the extent to which $1 million-plus organizations were dependent on Federal funds; it is clear from these data that for these organizations in the public education and private sectors, Federal funds are a key factor (half of them received at least 75 percent and a quarter at least 90 percent of their funds from this source). In the academic sector, the Federal dollars are only slightly less crucial.

Table V-6 shows that Federal funding is especially important for the small group of organizations in the private sector whose primary activity involves RDD&E work, not limited to the field of education. Clearly those firms have not developed sources of funding for education research outside of the Federal government: for half of them, Federal dollars represented at least 95 percent of their education RDD&E funds. In no other group is as large a proportion of the organizations as heavily dependent on Federal support; other segments of the private sector, and especially the academic sector, have a more diversified set of support sources.

4. Expenditures For RDD&E Functions

A tremendous range of activities is subsumed under the general label "RDD&E." Included, for example, are such diverse activities as textbook and curriculum development, work on testing theory, studies assessing existing programs, inquiries into the effects of social and demographic factors on student

achievement, development of models to acquaint teachers with new practices, and so on in a seemingly endless list.

ARROE tried to differentiate among these many activities, asking respondents to group them into the general functions of research, development, dissemination and evaluation and policy studies. We attempted to determine if there are sector "specialties" by function, or if differences in emphases among organizations by size, primary mission or principal funding source could be detected. To obtain the necessary data, we requested that recipients of the mail questionnaire indicate the percentage of their education RDD&E expenditures primarily used for each of the following functions:[42]

1. RESEARCH--systematic study to establish new facts or principles.

2. DEVELOPMENT--the disciplined invention, design, or testing of solutions to problems. Development of innovative programs, curricula, and tests was included.

3. DISSEMINATION--activities specifically designed to make R&D results known to interested or potential audiences, including workshops focused on specific innovations and demonstration programs whose aim is to convince, not to test.

4. EVALUATION AND POLICY STUDIES--systematic inquires to meet the needs of policy makers and intended to inform their

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42. Complete definitions of each function were given in the appendix of the mail instrument. (See Appendix A).

decisions. Assessments of the effects and operations of research and research-related programs, determination of the feasibility of new programs, and studies focusing on needs and goals, were included.

The relative importance of these functions within each sector is indicated in Table V-7 which shows that:

- Practically all organizations spend at last some of their funds for research.

- More organizations emphasize research in the academic and private sectors than in the public education sectors. Half of all academic organizations spent at least 30 percent of their funds for research as against median allocations of 20 percent in the private and 10 percent in the public education sector. The third quartile figures show a similar emphasis.

- Both small and large public education organizations commonly apply a greater percentage of their funds to the evaluation function than do organizations in the private or academic sectors. One-quarter of the public education organizations spend at least half of their education RDD&E funds for evaluation; the third quartile figures for the private and academic organizations are 35 and 20 percent respectively.

TABLE V-7

PERCENTAGE OF EDUCATION RDD&E FUNDS USED PRIMARILY FOR VARIOUS FUNCTIONS, BY SECTOR

Function	Sector											
	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Research.	3	10	25	5	10	25	10	20	49	10	30	70
Development	4	15	40	7	20	36	0	20	40	0	20	40
Dissemination . . .	2	10	20	5	10	24	1	10	30	0	10	20
Evaluation & Policy Studies. .	8	25	50	10	27	50	2	16	35	0	10	20
Other	0	0	0	0	0	8	0	0	0	0	0	0
Number of Organizations Responding	(170-177)			(80)			(164-165)			(503-511)		
Number of Missing Cases	(8-15)			(30)			(29-30)			(71-79)		
Total (N)[a]	(185)			(110)			(194)			(582)		

[a]Mail questionnaire respondents only.

- There is little apparent difference by sector in proportion of funding organizations spend for development or dissemination activities. Dissemination seems least important; half of the organizations in all sectors allocate only 10 percent or less and three-quarters 30 percent or less of expenditures to this function; 25 percent of academic organizations reported no dissemination expenditures at all.

The pattern is remarkably similar when data for the $1 million-plus organizations are examined (Table V-8). The only major shift in emphasis occurs among public education organizations, where development increases and evaluation decreases in importance.

Differences in functional specialization, however, were evident when different types of organizations were compared (Table V-9). Organizations which are <u>not</u> specialized to <u>education</u> RDD&E most often have research emphases in their spending and, in the private sector, emphasize evaluation and policy studies as well. Organizations which are specialized to the field of education more commonly engage in development activities, as do those whose main function lies outside the RDD&E area.

<u>5. Expenditures For Education Levels</u>

The information presented in Table V-10 identifies the levels of education for which funding is used. Of interest is

TABLE V-8

PERCENTAGE OF EDUCATION RDD&E FUNDS USED PRIMARILY FOR VARIOUS FUNCTIONS BY $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

Function	Sector								
	Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Research	5	8	11	10	18	40	11	28	59
Development	17	35	62	8	20	40	10	20	40
Dissemination	2	15	20	2	10	31	5	10	25
Evaluation & Policy Studies	6	18	44	10	20	40	0	10	12
Other	0	0	21	0	0	0	0	1	0
Number of Organizations Responding	(14)			(32)			(39)		
Number of Missing Cases	(0)			(1)			(7)		
Total (N)[a]	(14)			(33)			(46)		

[a]Mail questionnaire respondents only. Does not include small public education sector, since N for that group was only 3.

TABLE V-9

PERCENTAGE OF EDUCATION RDD&E FUNDS USED PRIMARILY FOR VARIOUS FUNCTIONS BY EDUCATION RDD&E AND OTHER RDD&E SPECIALISTS, PRIVATE AND ACADEMIC SECTORS

Function	Private Sector									Academic Sector								
	Education RDD&E Specialists			Other RDD&E Specialists			All Others			Education RDD&E Specialists			Other RDD&E Specialists			All Others		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Research	10	20	41	0	42	72	5	15	40	10	30	60	33	60	90	10	30	70
Development	0	20	40	0	1	18	0	20	40	2	18	40	0	0	10	0	20	50
Dissemination	5	16	30	0	1	10	2	15	40	5	10	20	0	5	20	0	10	20
Evaluation & Policy Studies	5	18	35	4	26	61	0	10	26	0	10	20	0	2	25	0	10	22
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Organizations Responding	(62)			(22)			(78)			(144-145)			(34-35)			(322-328)		
Number of Missing Cases	(6)			(4)			(16)			(8-9)			(3-4)			(54-60)		
Total (N)[a]	(68)			(26)			(94)			(153)			(38)			(382)		

[a]Mail questionnaire respondents only.

TABLE V-10

PERCENTAGE OF EDUCATION RDD&E FUNDS APPLIED TO VARIOUS LEVELS OF EDUCATION, BY SECTOR

Level	Sector											
	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Pre-primary	0	0	5	0	0	5	0	0	5	0	0	0
Elementary.	35	50	60	20	45	60	0	0	34	0	0	20
Secondary	15	35	50	15	30	43	0	5	30	0	0	25
Post-Secondary. . . .	0	0	0	0	0	2	0	0	30	0	25	95
Adult/continuing. . .	0	0	0	0	0	0	0	0	10	0	0	10
Not specific to any level	0	0	10	0	0	20	0	0	20	0	0	0
Number of Organizations Responding	(176-179)			(83-84)			(168)			(519-521)		
Number of Missing Cases	(6-9)			(42-43)			(26)			(61-63)		
Total (N)[a]	(185)			(110)			(194)			(582)		

[a]Mail questionnaire respondents only.

the specialization visible in the public education sectors (where, not surprisingly, organizations focus upon elementary and secondary education), and in the academic sector, where the post-secondary level is most often an area of specialization. Thus, it appears that in these sectors organizations predominate that are studying those levels with which the sector is most closely involved as a practicing institution. In contrast, in the private sector, no one level stands out as an area of specialization for a majority of organizations. (See Table V-11 which shows complete distributions on the "level" variables for the private sector organizations.)

These patterns emerge even more sharply in Table V-12, which shows the number and percent of organizations spending more than half of their funds for a particular level. The specializations of the public education and academic sectors are again apparent, although it is worth noting that the public education sector includes very few organizations specializing in pre-primary education; in fact, the private sector has more groups devoted to this area. Again, in the private sector, no one level stands out as an area of specialization for even one-quarter of the group. Rather, there are a few organizations with a heavy commitment to each of the areas, and a substantial minority (18%) whose resources were predominantly spent on work not specific to any level.

TABLE V-11

DISTRIBUTION OF PRIVATE SECTOR ORGANIZATIONS BY PERCENTAGE OF EDUCATION RDD&E FUNDS APPLIED TO VARIOUS LEVELS OF EDUCATION

Percentage of Funds Applied to Level	Level											
	Pre-Primary		Elementary		Secondary		Post-Secondary		Adult-Continuing		Not Specific to Any Level	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
0 - 25	(148)	88	(115)	68	(121)	72	(122)	73	(148)	88	(135)	80
26- 50	(7)	4	(34)	20	(34)	20	(9)	11	(7)	4	(3)	2
51- 75	(4)	2	(10)	6	(4)	2	(3)	2	(6)	4	(2)	1
76-100	(9)	5	(9)	5	(9)	5	(24)	14	(7)	4	(28)	17
Number of Organizations Reporting	(168)	100	(168)	100	(168)	100	(168)	100	(168)	100	(168)	100
Number of Missing Cases	(26)		(26)		(26)		(26)		(26)		(26)	
Total (N)[a]	(194)		(194)		(194)		(194)		(194)		(194)	

[a]Mail questionnaire respondents only.

TABLE V-12

NUMBER AND PERCENT OF ORGANIZATIONS APPLYING MORE THAN 50 PERCENT OF THEIR EDUCATION RDD&E FUNDS TO VARIOUS EDUCATION LEVELS, BY SECTOR

Level	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%[b]	(N)	%	(N)	%
Pre-primary	(4)	2	(1)	1	(13)	8	(13)	2	(31)	3
Elementary.	(59)	33	(23)	28	(19)	11	(38)	7	(139)	15
Secondary	(14)	8	(10)	12	(13)	8	(37)	7	(74)	8
Post-secondary.	(0)	0	(2)	2	(27)	16	(196)	38	(225)	24
Adult/continuing.	(0)	0	(1)	1	(13)	8	(36)	7	(50)	5
Not specific to any level . .	(15)	9	(12)	14	(30)	18	(48)	9	(105)	11
Number of Organizations Responding	(176-179)		(83-84)		(168)		(519-521)		(946-950)	
Number of Missing Cases	(6-9)		(26-27)		(26)		(61-63)		(121-125)	
Total (N)[a]	(185)		(110)		(194)		(582)		(1071)	

[a]Mail questionnaire respondents only.

[b]Percents differ from those shown in Table V-11 due to rounding.

Organizations handling a large volume of education RDD&E are distributed quite differently than the entire mail questionnaire population (Table V-13), although we again see the emphasis on elementary and secondary education in the public education sector. However, in contrast to the private sector group in general, a majority of $1 million-plus private sector organizations also tend to specialize in the elementary level. In the academic sector, the emphasis on post-secondary education is somewhat less common among large organizations than in the total academic group, as elementary and secondary education, and work not specific to <u>any</u> level of education, increase in importance.

Table V-14 compares the importance of the various levels among education RDD&E specialists, other RDD&E organizations, and all others in the private and academic sectors. In the academic sector, the emphasis on post-secondary education among all groups still predominates, but is somewhat more common among those groups specialized to education RDD&E. However, in the private sector, other areas of attention surface, for example, the pre-primary area for organizations whose main mission in not RDD&E, and the secondary and post-secondary areas for education RDD&E specialists.

It is important to note that the information just presented (like some of the other fine-grained data discussed in this section) was not available for the sizable group of respondents

TABLE V-13

PERCENTAGE OF EDUCATION RDD&E FUNDS APPLIED TO VARIOUS EDUCATION LEVELS BY $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

Level	Sector								
	Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Pre-primary	0	5	10	0	0	5	0	0	5
Elementary	22	44	52	1	30	50	0	10	29
Secondary	19	30	42	0	18	32	0	10	26
Post-Secondary	0	0	2	0	8	29	5	15	60
Adult/continuing	0	0	0	0	2	10	0	2	10
Not specific to any level	0	1	15	0	0	20	0	5	40
Number of Organizations Responding	(14)			(32)			(45)		
Number of Missing Cases	(0)			(1)			(1)		
Total (N)[a]	(14)			(33)			(46)		

[a]Mail questionnaire respondents only. Does not include small public education sector, since N for that group was only 3.

TABLE V-14

PERCENTAGE OF EDUCATION RDD&E FUNDS APPLIED TO VARIOUS LEVELS BY EDUCATION RDD&E AND OTHER RDD&E SPECIALISTS, PRIVATE AND ACADEMIC SECTORS

Level	Private Sector									Academic Sector								
	Education RDD&E Specialists			Other RDD&E Specialists			All Others			Education RDD&E Specialists			Other RDD&E Specialists			All Others		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Pre-primary	0	0	0	0	0	1	0	0	18	0	0	0	0	0	0	0	0	0
Elementary	0	5	40	0	0	25	0	4	33	0	0	20	0	0	0	0	0	25
Secondary	0	12	40	0	2	40	0	0	25	0	0	20	0	0	10	0	0	25
Post-Secondary	0	5	42	0	10	30	0	0	26	0	40	95	0	32	79	0	25	95
Adult/continuing	0	0	11	0	2	25	0	0	0	0	0	10	0	0	28	0	0	10
Not specific to any level	0	0	20	0	0	25	0	0	20	0	0	0	0	0	44	0	0	0
Number of Organizations Responding	(62)			(23)			(80)			(141-143)			(35-36)			(336-338)		
Number of Missing Cases	(6)			(3)			(6)			(10-12)			(2-3)			(44-46)		
Total (N)[a]	(68)			(26)			(94)			(153)			(38)			(382)		

[a]Mail questionnaire respondents only.

for whom data were collected by telephone. Therefore, these patterns should be investigated in greater detail and for the universe as a whole before definitive conclusions are drawn.

6. Summary

The principal findings concerning the funding issues discussed in this section are as follows:

- Counting only the three-quarters of the eligible organizations that provided data on total expenditures, approximately $735,000,000 was reportedly spent on education RDD&E activities during the organizations' last fiscal year.
- The Federal government is a major funding source of education RDD&E for organizations in all sectors, although the academic sector and especially small public education organizations are somewhat less dependent on this source. Some subsegments of the education RDD&E community (for example, private RDD&E organizations not specialized to education work) are almost exclusively supported through Federal funds. Overall, the Federal government supplied funds for 53 percent of all expenditures reported by mail survey respondents.
- More organizations emphasize the research function in the private and academic sectors than among public education organizations, where emphasis--in terms of expenditures--is more commonly placed on evaluation. Across all sectors, organizations typically spend the smallest proportion of their education RDD&E funds for dissemination.
- Both public education and academic sector organizations emphasize in their expenditure patterns those levels of education with which practitioners in the sector are primarily involved. In the private sector, there is less concentration of organizations specialized to any particular level.

F. Staffing Patterns

1. Personnel Estimates

The NIE Databook estimates that the size of the professional education R&D work force was approximately 10,000

in 1974. This figure is based on a review of previous studies and upon consideration of memberships in professional associations, authorship of R&D literature, and employment data provided in directories of education R&D organizations. [43] Although this issue was not specifically discussed, the reader is given the impression that the estimate includes part-time as well as full-time employees.

ARROE's estimates, which are essentially descriptive of FY 77, are presented in Figure V-2. Even allowing for the fact that ARROE data include dissemination and evaluation personnel, the ARROE and Databook figures seem far apart, with the ARROE estimates at 22,000 for full-time and 12,000 for part-time staff. ARROE estimates of staff employed by education RDD&E or other RDD&E organizations (9,267 full-time and 5,662 part-time staff) are closer to the Databook information, suggesting that ARROE covered types of performers (such as academic organizations whose primary mission is not research, hospitals, publishers, etc.) which were not included in the earlier NIE publication. (See Figure V-3.)

In examining Figures V-2, V-3, V-4, and Table V-15 (which presents the detailed data upon which Figures V-3 and V-4 are based), the following findings are noteworthy:

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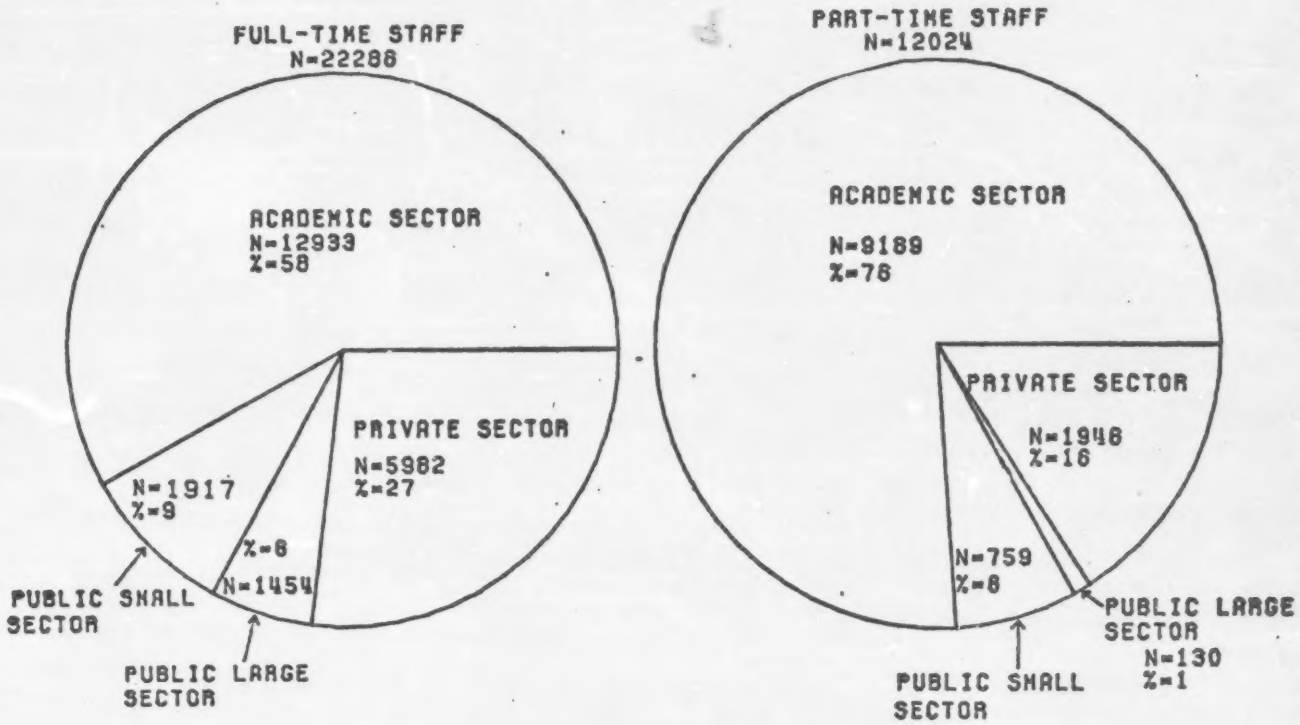
43. Op cit, pp. 46-50.

FIGURE V-2

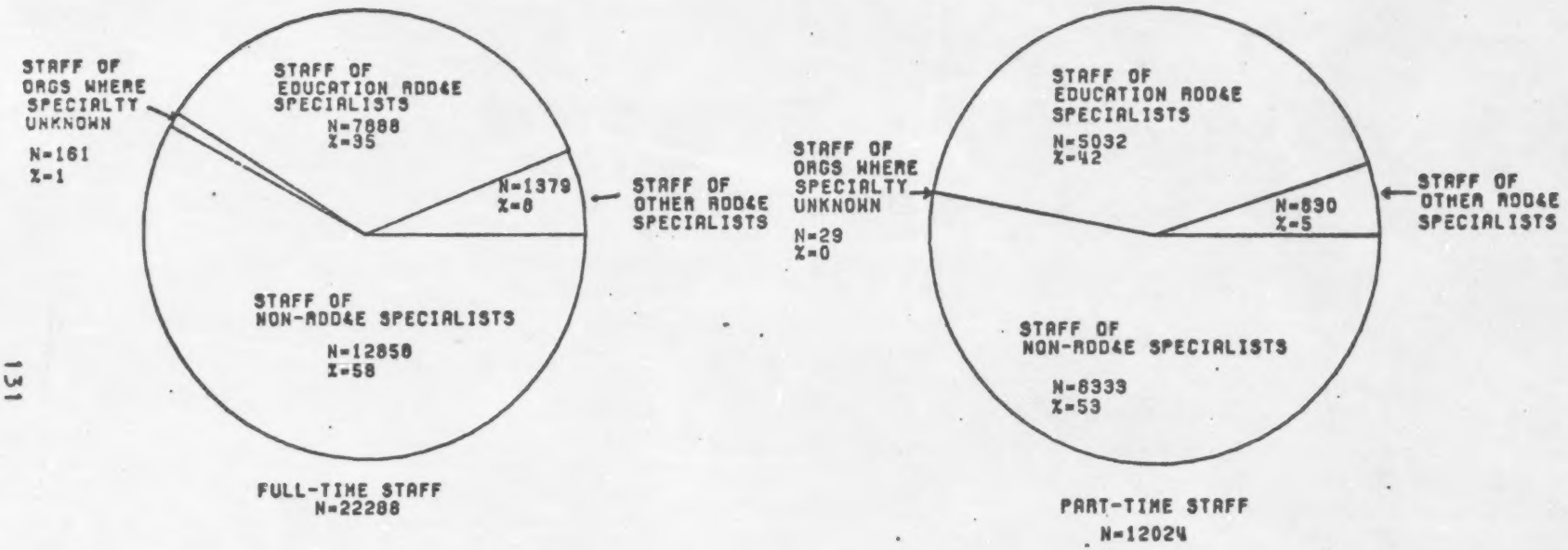
DISTRIBUTION, BY SECTOR, OF FULL-TIME AND PART-TIME PROFESSIONALS "PRIMARILY ENGAGED IN EDUCATION RODGE"



BASED ON REPORTS FROM 2924 ORGANIZATIONS (95%).

FIGURE V-9

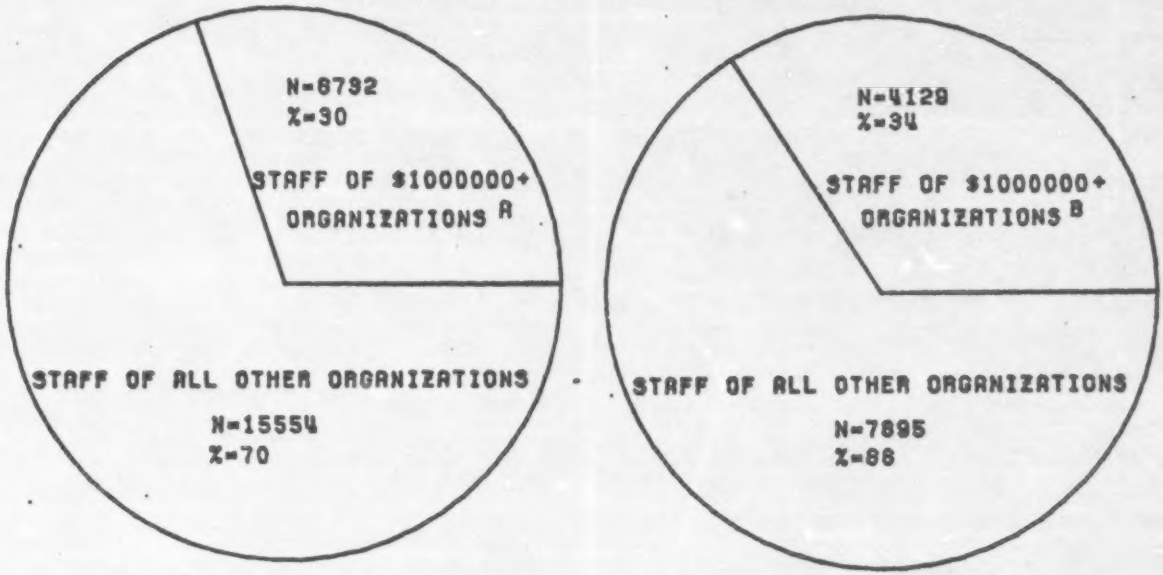
PROFESSIONAL STAFF EMPLOYED BY EDUCATION RDD&E AND OTHER RDD&E SPECIALISTS AS A PROPORTION OF TOTAL PROFESSIONAL STAFF



BASED ON REPORTS FROM 2824 ORGANIZATIONS (95%)

FIGURE V-4

PROFESSIONAL STAFF EMPLOYED BY $1 MILLION-PLUS ORGANIZATIONS
AS A PROPORTION OF TOTAL PROFESSIONAL STAFF



FULL-TIME STAFF
N=22286

PART-TIME STAFF
N=12024

A) 10 ORGANIZATIONS (0%) DID NOT REPORT THEIR STAFF SIZE.
B) 14 ORGANIZATIONS (0%) DID NOT REPORT THEIR STAFF SIZE.

TABLE V-15

NUMBER AND PERCENT OF EDUCATION RDD&E PROFESSIONAL STAFF EMPLOYED IN ORGANIZATIONS OF VARIOUS TYPES

	Full-Time Staff (N)	%	Part-Time Staff (N)	%
BY VOLUME OF EXPENDITURES				
$1 Million-Plus Organizations.	(6,732)	30	(4,129)	34
All Other Organizations.	(15,554)	70	(7,895)	66
Total Staff[a]	(22,286)	100	(12,024)	100
BY SECTOR AND SPECIALIZATION				
Private Sector				
Education RDD&E Organizations.	(2,393)	40	(1,095)	56
Other RDD&E Organizations	(552)	9	(154)	8
Non-RDD&E Organizations.	(2,965)	50	(690)	35
Specialty Not Determined	(72)	1	(7)	0
Total Private Sector Staff[b]	(5,982)	100	(1,946)	100
Academic Sector				
Education RDD&E Organizations.	(5,209)	40	(3,885)	42
Other RDD&E Organizations.	(827)	6	(476)	5
Non-RDD&E Organizations.	(6,808)	53	(4,806)	52
Specialty Not Determined	(89)	0	(22)	0
Total Academic Sector Staff[c]	(12,933)	100	(9,189)	100

[a]Ten organizations (6%) did not report full-time and 14 (8%) did not report part-time staff.

[b]Thirty one organizations (6%) did not report full-time and 37 (8%) did not report part-time staff.

[c]Forty nine organizations (4%) did not report full-time and 62 (5%) did not report part-time staff.

- Fifty-eight percent of the professional education RDD&E staff employed full-time work in academic institutions; 27 percent are employed by the private sector, and only 15 percent work in public education agencies. The patterns of concentration is even more extreme for part-time personnel, with three-quarters of all part-time professionals working in academic organizations, and only seven percent in public education agencies (Figure V-2).

- The majority of full- and part-time education RDD&E professionals work in organizations which do not have RDD&E as their primary function. This distribution conforms to spending patterns, since organizations not specializing in RDD&E spent 57 percent of all education RDD&E funds identified by this study (Figure V-3).

- Although they spent 68 percent of all education RDD&E funds, the large performers-- those whose expenditures for this type of work exceeded $1 million during their latest fiscal year--employ only 30 percent of all full-time professional education RDD&E staffs. Clearly, the major performers, who carry out large-scale projects, expend a considerable portion of their funds elsewhere--perhaps on professional personnel whose primary duties are not in the field of education research or on support staff (Figure V-4).

2. Organizational Size

As shown in Figure IV-2 (Chapter IV, page 77), the education RDD&E universe is characterized by organizations with small numbers of staff members engaged in this type of work. ARROE data indicate that 26 percent of the organizations have no staff at all "primarily involved in education RDD&E," that is, spending at least 50 percent of their working hours (or nonteaching hours in academic institutions) on RDD&E activities, so that in these organizations the education work is done by persons whose primary responsibilities lie elsewhere. Conversely, 11 percent--or about 240--organizations have a staff of 20 or more full-time employees assigned to education RDD&E activities at least half-time.

Staff sizes of organizations at the first quartile, median, and third quartile of the distribution are shown in Table V-16. We see again that small organizations predominant. Even when the public education data are reaggregated by agencies--as opposed to organizations--staff sizes of the "median" agency remain small. As presented earlier (Chapter IV, p. 53 ff.), the median for local education agencies is "one"; for intermediate service agencies the median is "two," and for state education agencies, it is "ten."

Not surprisingly, professional staffs involved in education RDD&E are somewhat larger in organizations that specialize in

TABLE V-16

FULL AND PART-TIME PROFESSIONAL EDUCATION RDD&E STAFF SIZE, BY SECTOR

	Sector											
	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Number of Full-Time Staff[a]	0	1	3	3	6	11	1	4	10	0	2	7
Number of Part-Time Staff	0	0	1	0	0	2	0	1	4	0	1	4
Number of Organizations Responding	(528)			(128-130)			(441-447)			(1206-1219)		
Number of Missing Cases	(9)			(21-23)			(31-37)			(49-62)		
Total (N)	(537)			(151)			(478)			(1268)		

[a]In this and subsequent tables, "staff" refers to persons primarily involved in education RDD&E activities.

that type of work than in those which do not, although the differences between specialists and nonspecialists are perhaps smaller than might have been expected. (See Table V-17.) It is noteworthy that the median "education" staff size of private sector RDD&E organizations that do not specialize in education work is only three. It is probable that in these organizations a fair proportion of education activities are conducted by persons with nonsubject specific skills, such as survey, program evaluation and computer expertise, who also participate in a variety of projects in other subject matter areas and thus are not considered primarily "education" staff.

The information on concentration of expenditures provides a plausible explanation for the generally small staff sizes found in all sectors, among education specialized and other organizations alike. Since about 90 percent of the money is spent by about 30 percent of the organizations, the remaining organizations presumably do a very small volume of work for which a small staff is adequate.

As might be predicted from the concentration of expenditures data, average staff size increases dramatically for organizations whose education RDD&E expenditures are $1 million or more. (See Table V-18.) Still, as suggested earlier (page 134), the proportion of total education RDD&E personnel working in these large organizations is <u>not</u> commensurate with the proportion of expenditures they consume.

TABLE V-17

FULL AND PART-TIME PROFESSIONAL STAFF SIZE OF EDUCATION RDD&E SPECIALISTS, OTHER RDD&E SPECIALISTS AND ALL OTHERS, PRIVATE AND ACADEMIC SECTORS

	Private Sector									Academic Sector								
	Education RDD&E Specialists			Other RDD&E Specialists			All Others			Education RDD&E Specialists			Other RDD&E Specialists			All Others		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Number of Full-Time Staff.	3	5	18	1	3	8	0	3	8	1	4	10	0	1	5	0	2	6
Number of Part-Time Staff.	0	2	6	0	1	5	0	1	3	0	2	5	0	2	5	0	1	4
Number of Organizations Responding	(149-150)			(51-52)			(226-232)			(289-291)			(90-93)			(816-824)		
Number of Missing Cases	(5-6)			(4-5)			(18-24)			(12-14)			(5-8)			(28-36)		
Total (N)	(155)			(56)			(250)			(303)			(98)			(852)		

TABLE V-18

FULL AND PART-TIME PROFESSIONAL STAFF SIZE OF $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

	Sector											
	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Number of Full-Time Staff	7	22	49	7	24	44	20	32	70	7	22	46
Number of Part-Time Staff	0	0	3	0	0	2	0	4	8	2	14	36
Number of Organizations Responding	(6)			(16)			(54-58)			(82-84)		
Number of Missing Cases	(0)			(0)			(0-4)			(8-10)		
Total (N)	(6)			(16)			(58)			(92)		

3. Staff Characteristics

While a detailed description of the experience and training of education RDD&E professionals was beyond ARROE's scope, two items pertaining to staff characteristics were used: number of professional education RDD&E staff holding a doctoral degree (asked on both the phone and mail instruments), and number identified with various specialties (mail instrument only).

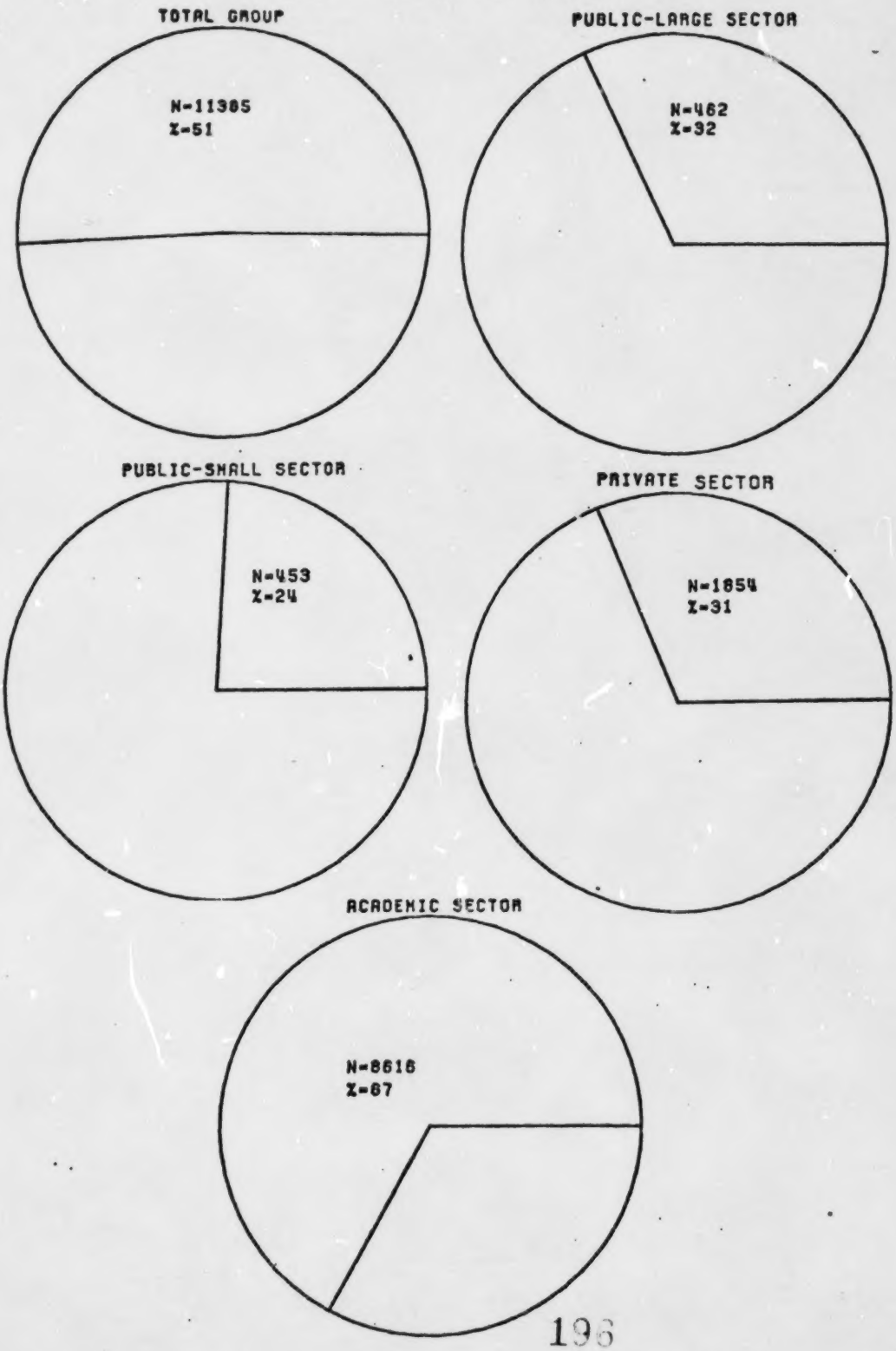
These data can, in turn, be used in two ways: to characterize the workforce as a whole (e.g., what percent of all staff have doctorates?); and to describe the composition of organizations (e.g., in what percent of organizations does a majority of the staff have doctorates?). Both approaches are used in the following discussion.

Figure V-5 and Table V-19 present information describing education RDD&E staff in general. From these displays, we find that:

- Based on a response from 94 percent of the organizations, half (51%) of the education RDD&E workforce employed as full-time staff have doctorates. Doctorates are held by more than two-thirds of staff employed in academic institutions, by about one-third of the staff in the private and large public education sectors, and by about one-quarter of the small public education agency staff.

FIGURE V-5

NUMBER AND PERCENT OF FULL-TIME PROFESSIONAL EDUCATION ADD4E WORKFORCE HOLDING DOCTORATES, BY SECTOR



BASED ON RESPONSES FROM 2209 ORGANIZATIONS (94%)

TABLE V-19

TOTAL NUMBER AND PERCENT OF PROFESSIONAL FULL-TIME STAFF IDENTIFIED BY MAJOR FIELD OF EXPERTISE

Field	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Education	(330)	58	(661)	68	(1055)	41	(3034)	58	(5080)	54
Psychology	(78)	14	(68)	7	(421)	16	(541)	10	(1108)	12
Other Social Science	(14)	2	(25)	3	(301)	12	(470)	9	(810)	9
Humanities	(15)	3	(22)	2	(126)	5	(79)	2	(242)	3
Physical and Biological Sciences	(5)	1	(14)	1	(43)	2	(348)	7	(410)	4
Mathematics, Statistics	(39)	7	(74)	8	(118)	5	(105)	2	(336)	4
Business, Economics, Accounting, Public Administration	(19)	3	(30)	3	(121)	5	(113)	2	(283)	3
Communications, Library Science	(24)	4	(17)	2	(188)	7	(176)	3	(405)	4
Operations Research, Systems Analysis	(22)	4	(33)	3	(109)	4	(64)	1	(228)	2
Other	(20)	4	(26)	3	(92)	4	(290)	6	(428)	5
Total Number of Staff	(566)	100	(970)	100	(2574)	100	(5220)	100	(9330)	100

Data represent responses received from 40% of eligible organizations (questions were asked on mail questionnaire only).

- Based on responses received from about 40 percent of the organizations (since the item was asked by mail only), about half (54%) of the full-time staff were identified as having "education" as their major area of expertise. This percent is highest in the large public education sector (where about two-thirds of RDD&E personnel specialize in education), and lowest in the private sector (41%). Other disciplines represented among education RDD&E personnel are psychology (which is the specialty of 12 percent of the workforce overall), and other social sciences (the specialties of 9% of the personnel). Slightly more diversity in staff specialties is evident in the private sector, with "other social sc'ences," "humanities," "business, economics, accounting, public administration," and "communications, library science" having more representation there than in the other sectors. It is also noteworthy that a slightly greater percentage of employees are statisticians or mathematicians in the public education sector than in the others.

The remaining figures and tables in this section present information describing organizational characteristics. The "big picture" for full-time professional staff is shown in Tables V-20 and V-21, and in Figures V-6 and V-7, while details concerning both full and part-time staff are given in Appendix G. Noteworthy findings regarding full-time staff members are:

TABLE V-20

DISTRIBUTION OF ORGANIZATIONS BY PERCENTAGE OF PROFESSIONAL FULL-TIME STAFF HOLDING DOCTORATES, BY SECTOR

Percent of Staff Holding Doctorates	Number and Percent of Organizations								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
0 - 25 percent.	(175)	48	(40)	33	(185)	53	(122)	14	(522)	31
26 - 50 percent	(87)	24	(46)	38	(86)	25	(138)	16	(357)	21
51 - 75 percent	(14)	4	(22)	18	(28)	8	(115)	14	(179)	11
76 - 100 percent.	(92)	25	(13)	11	(51)	15	(466)	55	(622)	37
Number of Organizations Responding	(368)	100	(121)	100	(350)	100	(841)	100	(1680)	100
Number of Missing Cases	(169)		(30)		(128)		(427)		(754)	
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

TABLE V-21

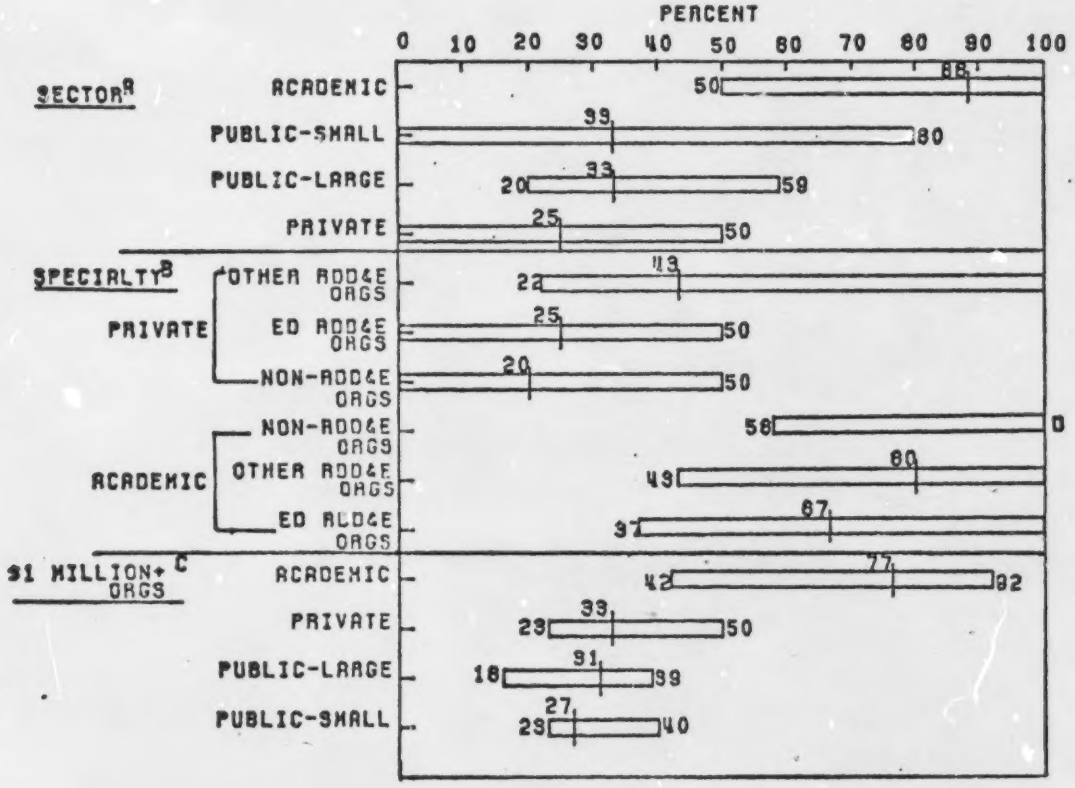
DISTRIBUTION OF ORGANIZATIONS BY PERCENTAGE OF PROFESSIONAL FULL-TIME STAFF IDENTIFIED WITH "EDUCATION" AS THEIR MAJOR AREA OF EXPERTISE, BY SECTOR

Percent of Staff Identifying with "Education"	Number and Percent of Organizations								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
0 - 25 percent.	(26)	20	(18)	21	(52)	37	(158)	41	(254)	34
26 - 50 percent	(22)	16	(13)	16	(31)	22	(53)	14	(119)	16
51 - 75 percent	(15)	11	(24)	29	(22)	16	(36)	9	(97)	13
76 - 100 percent.	(73)	54	(29)	34	(37)	26	(142)	37	(281)	38
Number of Organizations Responding	(136)	100	(84)	100	(142)	100	(389)	100	(751)	100
Number of Missing Cases	(49)		(26)		(52)		(193)		(320)	
Total (N)[a]	(185)		(110)		(194)		(582)		(1071)	

[a]Mail questionnaire respondents only.

FIGURE V-6

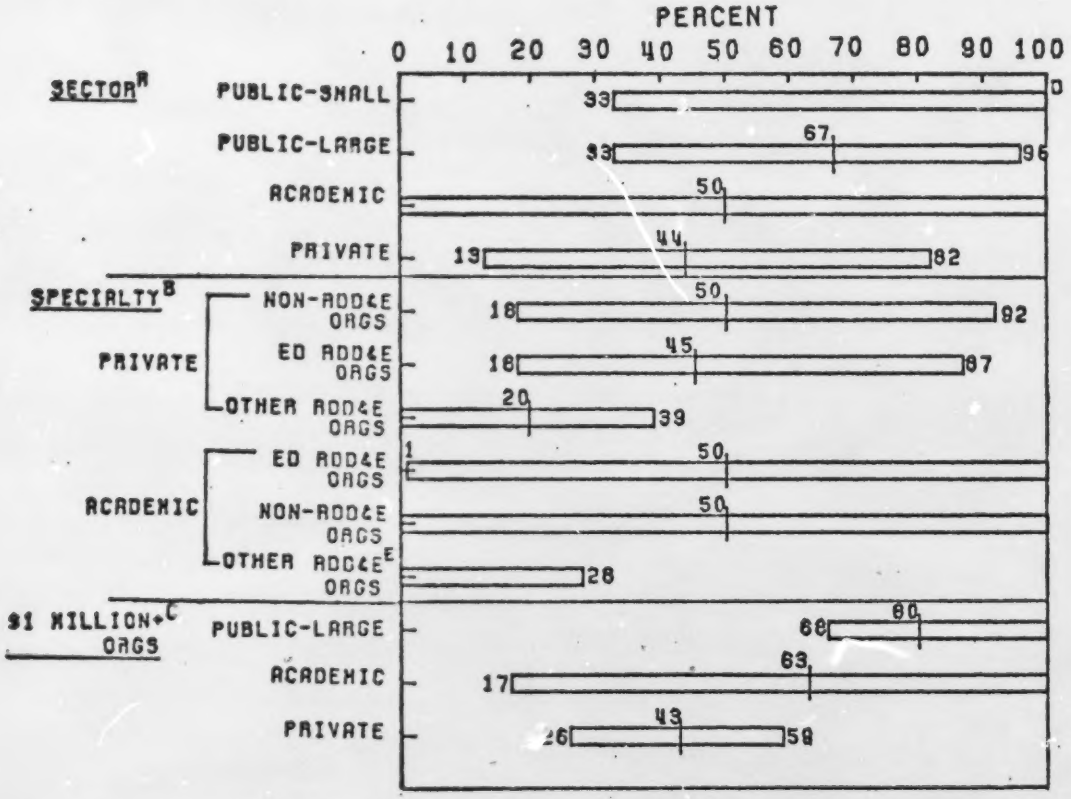
PERCENTAGE OF FULL-TIME EDUCATION RDD&E PROFESSIONALS HOLDING DOCTORATES, BY ORGANIZATIONAL SECTOR, SPECIALTY, AND SIZE: QUARTILE BOUNDS



A) BASED ON RESPONSES FROM 1680 ORGANIZATIONS (69%).
B) BASED ON RESPONSES FROM 1171 ORGANIZATIONS (68%).
C) BASED ON RESPONSES FROM 153 ORGANIZATIONS (89%).
D) MEDIAN AND Q3 BOTH 100.

FIGURE V-7

PERCENTAGE OF FULL-TIME EDUCATION RDD&E PROFESSIONALS IDENTIFIED WITH "EDUCATION" AS THEIR PRIMARY AREA OF EXPERTISE, BY ORGANIZATIONAL SECTOR, SPECIALTY, AND SIZE: QUARTILE BOUNDS



A) BASED ON RESPONSES FROM 752 ORGANIZATIONS (70% OF MAIL RESPONDENTS).
B) BASED ON RESPONSES FROM 525 ORGANIZATIONS (69% OF MAIL RESPONDENTS).
C) BASED ON RESPONSES FROM 80 ORGANIZATIONS (83% OF MAIL RESPONDENTS). PUBLIC-SMALL SECTOR NOT INCLUDED SINCE N WAS ONLY 9.
D) MEDIAN AND Q3 BOTH 100.
E) Q1 AND MEDIAN BOTH 0.

- In 48 percent of the organizations overall, more than half of the staff have doctorates (Table V-20). Employing education RDD&E staff with doctorates is most characteristic of academic organizations, since in half of these organizations at least 88 percent of the staff, and in one-quarter all of the staff hold that degree. In contrast, in half of the public education and private organizations, one-third or fewer and one-quarter or fewer staff (respectively) are at the doctoral level. (The variability of the distribution in the small public education sector is also noteworthy. See Figure V-6, upper section.)

- In both the private and academic sectors, a smaller percentage of staff hold doctorates in organizations specializing in education RDD&E activities as compared to RDD&E groups, not specialized to education. (See Figure V-6, middle section.)

- A slightly smaller percentage of staff hold doctorates in the academic $1 million-plus organizations than among the academic organizations as a whole (Figure V-6, bottom section). To explain the finding, we may speculate that the larger academic organizations are more likely to hire junior and mid-level professional staff than are the smaller groups, which have small support staffs and depend on the services of a few "stars." However, the situation seems to be somewhat different in the private sector, where, in fact,

the large organizations typically have a higher percentage of doctorates than does the total sector. (Medians are 33 percent vs. 25 percent, but third quartile percents are the same.)

- The percentage of RDD&E staff identified with "education" as their primary specialty varies greatly among organizations (Table V-21). Examining the organizations by sector, employing a high percentage of "education specialists" is most characteristic of public education organizations and least characteristic of the private sector group. (See Figure V-7, top section.) Looking at organizations by primary mission, we typically find, in both the academic and private sectors, a lower percentage of "education specialists" in RDD&E organizations not specialized to education than in either education RDD&E or non-RDD&E groups. (Figure V-7, middle section.) Finally, "education specialists" are slightly more represented in the $1 million-plus academic and public education organizations than in their smaller counterparts, while, in the private sector the opposite is true. (Figure V-7, bottom section.)

4. Functional Emphases

Mail questionnaire respondents classified their organizations' professional education RDD&E personnel according to each staff member's "primary work activity," that is, the activity in which the greatest percentage of RDD&E time was spent. The results, for full-time employees, are presented in

Table V-22. Research was most often named, but not by a large margin. Overall, roughly 15-20 percent of staff were classified as specializing in each of the other functions (developrent, dissemination, evaluation and planning and administration). By sector, some functional specialization is evident. In the public education organizations roughly one-third of the staff are evaluators, while among academic staff the emphasis is more strongly upon research, and in the private sector upon both research and development. Overall, about 16 percent of the staff are disseminators, but this proportion dips to 10 percent in the large public education organizations and reaches 18 percent (its highest point) in the academic sector.

In addition to portraying the workforce per se, these same data can be used to describe organizational characteristics, so that we can determine if researchers, developers, etc. tend to congregate in some types of organizations in preference to others. Data characterizing the organizations are presented in the remaining tables in this section.

As might be expected, organizational staffing patterns tend to follow funding patterns. As shown in Table V-23:

- Public education organizations emphasize the evaluation function. In half of the organizations located in large agencies, at last 25 percent of the staff work primarily in evaluation or policy activities. These data "fit" the

TABLE V-22

NUMBER AND PERCENT OF PROFESSIONAL FULL-TIME WORKFORCE PERFORMING VARIOUS FUNCTIONS, BY SECTOR

Function	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
RDD&E Planning and Administration.	(154)	24	(142)	15	(374)	15	(630)	13	(1300)	15
Research.	(81)	13	(126)	13	(503)	20	(1210)	26	(1920)	22
Development	(104)	17	(164)	17	(739)	30	(750)	16	(1757)	20
Dissemination	(88)	14	(102)	10	(421)	17	(833)	18	(1444)	16
Evaluation & Policy Studies . .	(173)	28	(368)	38	(394)	16	(538)	11	(1473)	17
Other	(29)	5	(71)	7	(30)	1	(721)	15	(851)	10
Total Number of Persons[a]	(629)	100	(973)	100	(2461)	100	(4682)	100	(8745)	100

[a]Based on responses from 90% of mail questionnaire respondents.

TABLE V-23

PERCENTAGE OF PROFESSIONAL FULL-TIME STAFF SPECIALIZING IN VARIOUS FUNCTIONS, BY SECTOR

Function	Sector											
	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
RDD&E Planning & Administration .	0	17	50	0	17	31	0	14	33	0	7	33
Research	0	0	10	0	5	22	0	17	34	0	12	50
Development. . . .	0	0	16	0	0	28	0	7	33	0	0	33
Dissemination. . .	0	0	0	0	0	18	0	0	25	0	0	10
Evaluation & Policy Studies .	0	0	50	0	25	46	0	0	17	0	0	12
Other.	0	0	0	0	0	0	0	0	0	0	0	0
Number of Organizations Responding	(128-132)			(82-83)			(133-137)			(370-377)		
Number of Missing Cases	(53-57)			(27-28)			(57-61)			(205-212)		
Total (N)[a]	(185)			(110)			(194)			(582)		

[a]Mail questionnaire respondents only.

expenditures information reported in Table V-7; half of the public education organizations spend at least one-quarter of their funds on evaluation.

- There is a stronger concentration of research staff in the private and academic sector organizations than in the others. Thus, in one-quarter of the private organizations, at least 34 percent of the staff are researchers, while the third quartile figure for academic organizations is 50 percent. Again, staff functions and funding patterns coincide.

- RDD&E planners and administrators are found in organizations in all sectors, but particularly in small public education agencies, where, for one-quarter of the organizations, a majority of staff fill the "planner/administrator" role.

- As might be expected, in most organizations, a large proportion of staff do not specialize in dissemination activities. Only in the private sector does the third quartile figure reach 25 percent, its highest point.

Looking at the staffing characteristics of private and academic sector organizations with various specialties (Table V-24), the strong emphasis on research staff among RDD&E groups not specialized to education is noteworthy. (This finding also "matches" the expenditures patterns reported earlier (Table V-9)

TABLE V-24

PERCENTAGE OF PROFESSIONAL FULL-TIME STAFF SPECIALIZING IN VARIOUS FUNCTIONS IN EDUCATION RDD&E, OTHER RDD&E, AND OTHER ORGANIZATIONS, PRIVATE AND ACADEMIC SECTORS

Function	Private Sector									Academic Sector								
	Education RDD&E Specialists			Other RDD&E Specialists			All Others			Education RDD&E Specialists			Other RDD&E Specialists			All Others		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
RDD&E Planning & Administration.	0	17	33	0	3	20	0	17	33	0	12	33	0	0	7	0	0	25
Research	0	18	33	4	50	100	0	8	33	0	14	53	14	88	100	0	10	42
Development.	0	12	33	0	0	9	0	11	39	0	0	25	0	1	0	0	0	40
Dissemination.	0	10	25	0	0	0	0	0	32	0	0	17	0	0	0	0	0	8
Evaluation & Policy Studies.	0	0	16	0	18	78	0	0	11	0	0	6	0	0	13	0	0	13
Other.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Number of Organizations Responding	(52-53)			(17)			(61-64)			(121-125)			(21-23)			(221-226)		
Number of Missing Cases	(15-16)			(9)			(30-33)			(28-32)			(15-17)			(156-161)		
Total (N)[a]	(68)			(26)			(94)			(153)			(38)			(382)		

[a]Mail questionnaire respondents only.

for these RDD&E groups.) The emphasis on development for a portion of the "non-RDD&E" groups in both the academic and private sectors is also deserving of mention.

The medians for those organizations spending $1 million or more on education RDD&E suggest somewhat more dispersion in the types of functions specialized staff perform than is evident for the universe in general (Table V-25).

5. Summary

ARROE's major findings concerning education RDD&E staff are:

- Approximately 22,000 full-time and 12,000 part-time professional employees who are "primarily involved" in conducting education RDD&E activities were identified.
- More than half of the full-time staff work in academic institutions, more than a quarter in the private sector, and the rest (15%) in public education agencies.
- Based on responses from over 90 percent of the organizations, one-half of the full-time staff have doctorates. Responses from mail questionnaires (representing 40% of the organizations) indicate that about half of the full-time staff also have education as their major area of expertise.
- Staffs of education RDD&E performers are generally small. Median full-time professional education RDD&E staff size is "one" in small public education, "two" in academic, "four" in private, and "six" in large public education organizations.
- Staff size is dramatically larger in organizations with education RDD&E expenditures of $1 million or more. Although they comprise only 7 percent of the organizations, this group employs 30 percent of the full-time professionals. However, because of the concentration of funds in these large organizations, which account for 68 percent of all RDD&E expenditures, their utilization of RDD&E professionals is lower than might have been predicted from the expenditure data.

TABLE V-25

PERCENTAGE OF PROFESSIONAL FULL-TIME STAFF SPECIALIZING IN VARIOUS FUNCTIONS IN $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

Function	Sector								
	Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
RDD&E Planning & Administration. . .	0	9	41	4	11	22	5	12	32
Research	0	2	11	5	12	32	7	17	50
Development.	0	11	40	2	17	34	3	19	38
Dissemination.	0	9	28	0	12	28	0	6	16
Evaluation & Policy Studies.	0	20	65	4	14	26	0	5	15
Other.	0	0	12	0	0	0	0	0	3
Number of Organizations Responding	(12-13)			(28-30)			(35-37)		
Number of Missing Cases	(1-2)			(3-5)			(9-11)		
Total (N)[a]	(14)			(33)			(46)		

[a]Mail questionnaire respondents only. Does not include small public education sector, since N for that group was only 3.

- Functional emphases of staff tend to mirror funding patterns. Thus, evaluators are most prevalent among staff in public education agencies, while private and academic organizations emphasize researchers in their staffing patterns. Dissemination is not a common staff specialty just as it is not a function for which a large share of funds is spent.

- Staff diversity is more common among the $1 million-plus organizations than is evident for the universe in general.

G. Education RDD&E Projects And Activities

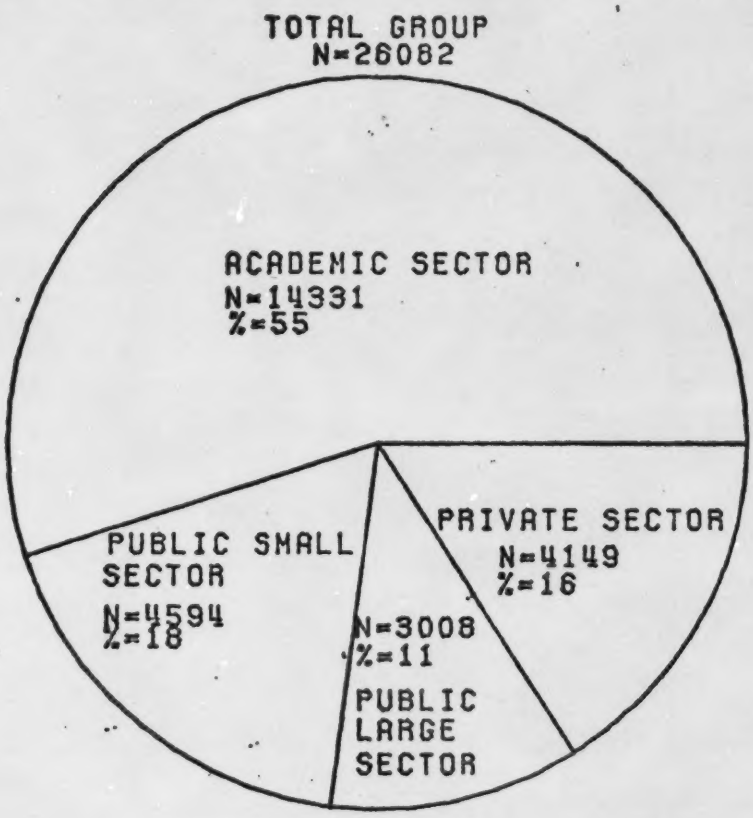
Much of education RDD&E work is organized in terms of projects. The word "project" was defined by ARROE as an "activity which has an assigned staff, is directed toward a specific problem or topic, and is conducted within a specific time limit, rather than being an ongoing service." In this section, the typical number, duration, and topical areas of projects performed by education RDD&E organizations are described. In addition, information is presented concerning the extent to which organizations maintain formal arrangements with others to carry out projects and other activities. Finally, methods used to disseminate RDD&E results are discussed.

1. Number, Size And Duration Of Projects

Overall, a total of 26,000 projects were reportedly conducted by organizations in all sectors, with more than one-half of these carried out in academic institutions. (See Figure V-8). However, the medians presented in Table V-26 indicate that, with the exception of large public education organizations (where the median number of projects is nine), performers in all sectors average about the same number of projects (with a median number of three or four).

FIGURE V-8

NUMBER OF EDUCATION RDD&E PROJECTS REPORTEDLY CONDUCTED



BASED ON REPORTS BY 2258 ORGANIZATIONS (93%).

TABLE V-26

DISTRIBUTION OF ORGANIZATIONS BY NUMBER OF PROJECTS CONDUCTED

Number of Projects	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
0.	(44)	8	(8)	7	(20)	4	(51)	4	(123)	5
1 - 4.	(222)	42	(28)	24	(255)	58	(548)	47	(1053)	47
5 - 9.	(136)	26	(23)	20	(95)	21	(272)	23	(526)	23
10-19.	(82)	16	(21)	18	(37)	8	(151)	13	(291)	13
20-49.	(29)	6	(19)	16	(29)	6	(104)	9	(181)	8
50 and over.	(11)	2	(16)	14	(7)	2	(50)	4	(84)	4
Q1		2		3		1		2		
Median		4		9		3		4		
Q3		8		25		6		9		
Number of Organizations Responding	(524)		(115)		(443)		(1176)		(2258)	
Number of Missing Cases	(13)		(36)		(35)		(92)		(176)	
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

Although these two sets of data--i.e., the concentration of projects in the academic sector and the medians for each sector--may seem contradictory at first glance, they do in fact "fit." A closer look shows that the proportion of the total number of projects found in any one sector is equivalent within three to five percentage points to the proportion of organizations in that sector. For example, the 1,268 academic organizations comprise 52 percent of the universe of 2,434 organizations and conduct 55 percent of the projects; the private organizations make up 20 percent of the universe and conduct 16 percent of the projects, etc.

However, although groups in all sectors (with, again, the exception of the 151 large public education organizations) average about the same number of projects, there are noteworthy differences among sectors in project size. While project sizes are generally small (with 43% of the organizations reporting that their "typical" project cost is $10,000 or less), projects conducted by private sector organizations tend to be larger than those conducted elsewhere (see Table V-27). Since project size and duration are related, it is not surprising that projects conducted by private sector groups are also somewhat longer than those conducted by other organizations. (Table V-28.)

Given the data presented earlier showing concentration of both staff and expenditures in the $1 million-plus organizations, we would expect that the number of projects and

TABLE V-27

DISTRIBUTION OF ORGANIZATIONS BY TYPICAL DOLLAR AMOUNT OF EDUCATION PROJECTS, BY SECTOR

	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
$10,000 or less	(97)	61	(26)	40	(26)	17	(224)	46	(373)	43
$10,001 - 20,000.	(12)	8	(11)	17	(20)	13	(70)	14	(113)	13
$20,001 - 50,000.	(37)	23	(14)	22	(40)	26	(94)	19	(185)	21
$50,001 - 100,000	(9)	6	(8)	12	(28)	18	(68)	14	(113)	13
$100,001 - 500,000.	(5)	3	(5)	8	(34)	22	(29)	6	(73)	8
Over $500,000	(0)	0	(1)	2	(7)	4	(4)	1	(12)	1
Number of Organizations Responding	(160)	100	(65)	100	(155)	100	(489)	100	(869)	100
Number of Missing Cases	(25)		(45)		(39)		(93)		(202)	
Total (N)[a]	(185)		(110)		(194)		(582)		(1071)	

[a]Mail questionnaire respondents only.

TABLE V-28

DISTRIBUTION OF ORGANIZATIONS BY TYPICAL PROJECT DURATION, BY SECTOR

	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
6 months or less	(58)	35	(13)	17	(21)	13	(105)	20	(197)	21
7 - 12 months	(83)	50	(48)	63	(65)	39	(210)	41	(406)	44
13 - 24 months.	(14)	8	(7)	9	(37)	22	(114)	22	(172)	19
25 - 36 months.	(8)	5	(5)	7	(25)	15	(46)	9	(84)	9
Over 36 months.	(3)	2	(3)	4	(17)	10	(42)	8	(65)	7
Number of Organizations Responding	(166)	100	(76)	100	(165)	100	(517)	100	(924)	100
Number of Missing Organizations	(19)		(34)		(29)		(65)		(147)	
Total (N)[a]	(185)		(110)		(194)		(582)		(1071)	

[a]Mail questionnaire respondents only.

their typical size would be greater in this group than in the universe as a whole. ARROE's findings show that this expectation is only partially correct. While the large performers do tend to conduct more projects than is characteristic of their smaller counterparts (Table V-29), typical project size tends to be larger only for organizations in the private and, to some extent, in the academic sector (Table V-30). In the public sector, however, this pattern breaks down. Here, we find that although the large performers conduct more projects, they are not typically of greater size. (Since this information is available only in the mail questionnaire data, this observation is based on reports from only 11 respondents, however.)

Comparing typical project sizes of the $1 million-plus organizations themselves, some tendency for large projects to gravitate toward the private sector can be detected. Thus, "super-size" projects ($500,000+) are "typical" of five large private organizations, compared to only one large public education agency, and to no academic institutions (see Table V-30).

Looking at the averages of the number of projects conducted by education and other RDD&E specialists vs. non-RDD&E groups in the private and academic sectors, it appears that academic organizations specializing in education RDD&E average more projects than do organizations in other categories. Otherwise,

TABLE V-29

NUMBER OF PROJECTS CONDUCTED BY $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

	Public - Small			Public - Large			Private			Academic		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Number of Projects. .	5	14	112	8	59	130	8	14	31	10	20	45
Number of Organizations Responding	(6)			(13)			(54)			(87)		
Number of Missing Cases	(0)			(3)			(4)			(5)		
Total (N)	(6)			(16)			(58)			(92)		

TABLE V-30

DISTRIBUTION OF $1 MILLION-PLUS AND OTHER ORGANIZATIONS BY TYPICAL DOLLAR AMOUNT OF EDUCATION RDD&E PROJECTS

Typical Project Size	Public - Large Sector				Private Sector				Academic Sector			
	$1 Million-Plus Organizations		Other Organizations		$1 Million-Plus Organizations		Other Organizations		$1 Million-Plus Organizations		Other Organizations	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
$ 50,000 or less	(9)	82	(33)	75	(7)	24	(72)	65	(26)	63	(324)	80
$ 50,001 - 100,000	(1)	9	(6)	14	(8)	28	(16)	14	(9)	22	(54)	13
$100,001 - 500,000	(0)	0	(5)	11	(9)	31	(21)	19	(6)	15	(22)	5
Over $500,000.	(1)	9	(0)	0	(5)	17	(2)	2	(0)	0	(4)	1
Number of Organizations Responding	(11)	100	(44)	100	(29)	100	(111)	100	(41)	100	(404)	100
Number of Missing Cases	(5)		(16)		(4)		(18)		(5)		(49)	
Total (N)[a]	(16)		(60)		(33)		(129)		(46)		(453)	

[a]Mail respondents only. Does not include small public education sector, since N for $1,000,000 + group was only 3.

no substantial differences among categories are evident.(See Table V-31.)

However, there are substantial differences among organizations with regard to project size. A larger proportion of organizations report typical project sizes of $100,000+ among private sector RDD&E groups than among organizations in other categories (Table V-32).

In an attempt to detect patterns linking project sizes and fund sources, the data were analyzed as presented in Table V-33. The table compares typical project sizes of organizations that do and do not receive over half of their funds from the Federal government. Across all sectors, a larger proportion of the group financed mainly by the Federal government reported typical project sizes of $100,000+ than did the group not receiving most of its funding from that source. In the private sector, the difference between the two groups is particularly striking.

2. Topical Areas Of Study

A standard classification of education research specialties or subject areas has not been developed to date, and previous studies have adopted approaches reflecting both the disciplinary orientation of investigators and administrative practice. Ten years ago, for example, Gideonese coded the topical areas to which funds were allocated in FY 1968 by several sponsoring

TABLE V-31

NUMBER OF PROJECTS CONDUCTED BY EDUCATION RDD&E SPECIALISTS, OTHER RDD&E SPECIALISTS AND ALL OTHERS IN THE PRIVATE AND ACADEMIC SECTORS

	Private Sector									Academic Sector								
	Education RDD&E Specialists			Other RDD&E Specialists			All Others			Education RDD&E Specialists			Other RDD&E Specialists			All Others		
	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Number of Projects	2	4	8	1	3	6	1	3	6	3	6	15	1	3	7	2	4	8
Number of Organizations Responding	(146)			(53)			(230)			(280)			(94)			(791)		
Number of Missing Cases	(9)			(3)			(20)			(23)			(4)			(61)		
Total (N)	(155)			(56)			(250)			(303)			(98)			(852)		

TABLE V-32

DISTRIBUTION OF EDUCATION RDD&E SPECIALISTS, OTHER RDD&E ORGANIZATIONS, AND ALL OTHERS BY TYPICAL DOLLAR AMOUNT OF EDUCATION RDD&E PROJECTS

Typical Project Size	Private Sector						Academic Sector					
	Education RDD&E Specialists		Other RDD&E Specialists		All Others		Education RDD&E Specialists		Other RDD&E Specialists		All Others	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
$ 50,000 or less	(29)	49	(5)	26	(50)	68	(93)	73	(28)	80	(263)	82
$ 50,001 - 100,000	(11)	19	(5)	26	(12)	16	(18)	14	(5)	14	(45)	14
$100,001 - 500,000	(15)	25	(9)	47	(9)	12	(17)	13	(2)	6	(10)	3
Over $500,000.	(4)	7	(0)	0	(3)	4	(0)	0	(0)	0	(4)	1
Number of Organizations Responding	(59)	100	(19)	100	(74)	100	(128)	100	(35)	100	(322)	100
Number of Missing Cases	(9)		(7)		(20)		(25)		(3)		(60)	
Total (N)[a]	(68)		(26)		(94)		(153)		(38)		(382)	

[a]Mail questionnaire respondents only.

TABLE V-33

ORGANIZATIONS WITH "TYPICAL" PROJECT SIZES
OF $100,000 OR MORE

Sector	TOTAL (N)	Number Receiving More Than 50% Support from Federal Government	Number Receiving 50% or Less Support from Federal Government
Public - Small.	(5)	(4)	(1)
Public - Large.	(6)	(3)	(3)
Private	(37)	(33)	(4)
Academic.	(33)	(22)	(11)
Total	(81)	(62)	(19)

Note: Data based on 68% of organizations eligible to answer these items.

agencies (OE, NSF, NIMH, NICHD, DOD and foundations). [44] Using a broad coding scheme, he found that the areas receiving most attention were "curriculum," "human development and learning processes," "instructional systems and practices" and "information sciences." A classification of 1,110 education research articles and of AERA papers written during the same time period yielded somewhat similar results. [45] About 20 percent of the articles focused on "psychological processes (including learning and child development) a category which is seemingly comparable to Gideonese's category "human development and learning processes." An additional 20 percent focused on "curriculum" (including methods of instruction, teaching machines, content and quality), which appears to encompass Gideonese's other categories as noted above.

Some shift in emphasis is suggested by the analysis of the primary subject areas of the products--i.e., curriculum materials, measurement instruments, models, and guides--sponsored by NIE in 1975. It is difficult to make that statement with certainty, however, since the classification scheme used by NIE is conceptually different from that of earlier investigators, emphasizing substantive interest areas rather than more general educational processes and activities.

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44. Gideonese, H. Educational Research and Development in the United States. Washington, D.C.; OE, 1969.

45. Persell, C. The Quality of Research on Education. New York, New York: Columbia University, Bureau of Applied Social Research, 1971.

Moreover, the topics reflected in NIE products may not be indicative of the interests of the R&D community at large. Despite these caveats, it is worthy of note that, in 1975, at least 10 percent of NIE products reflected the following areas: "basic skills," "education and work," "educational equity," "teacher training" and "early childhood education."

Because of the desire for a high level of specificity, ARROE--building on the advice of its advisory committees--prepared a very detailed list of topic areas. [46] We asked respondents to select those areas towards which the organizations' education RDD&E activities were primarily directed during its most recently completed fiscal year. Table V-34 shows subject areas mentioned by at least 30 percent of mail questionnaire respondents in each sector. In all sectors, "project and program evaluation" is the most frequently mentioned topic area. Three areas stand out as important in the public education sectors: basic skills (e.g., reading and math curricular development), needs of special populations (such as gifted, handicapped, and bilingual students), and enrollment and demographic analyses. Private sector concerns also include vocational, career, and cooperative education, education administration (both of which were also mentioned by the public education sector) and teacher education. The orientation of academic organizations toward teacher education, instructional

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46. The list--and the proportion of respondents who selected each specialty--are found in Appendix H.

TABLE V-34

AREAS MENTIONED BY 30 PERCENT OR MORE OF MAIL QUESTIONNAIRE RESPONDENTS AS "PRIMARY TOPICS" OF EDUCATION RD&E WORK

Areas	Sector			
	Public - Small %[a]	Public - Large %	Private %	Academic %
Evaluation				
Project and Program Evaluation	69	73	53	45
Learning Outcomes	37	42	30	34
Tests & Measurements	-[b]	37	-	-
Teachers Performance	-	-	-	34
Basic Skills				
Reading, Language Arts Curriculum	56	49	-	-
Mathematics Curriculum	46	43	-	-
English and Speech Curriculum	30	-	-	-
Special Needs				
Of Mentally Handicapped	35	-	-	-
Of Emotionally Handicapped	32	31	-	-
Of Physically Handicapped	31	-	-	-
Of Bilingual Students	-	35	-	-
Of Gifted and Talented	47	-	-	-
Administration				
Enrollment Analyses & Forecasting	43	44	-	-
Demographic Analyses	34	36	-	-
School Finance	-	37	-	-
Administration & Organization	-	43	34	-
Other Areas				
Vocational, Career & Cooperative Education	-	30	32	-
Teacher Education	-	-	32	37
Computers & Computer Use	30	-	-	-
Classroom Climate & Discipline	30	-	-	-
General Curriculum Development	44	34	-	-
Instructional Methods	-	-	-	33

[a]Percents based on responses from 1014 organizations (95% of mail respondents).

[b]Indicates that less than 30 percent of respondents mentioned area.

methods and evaluation methodology is reflected in their choice of topic areas.

The areas mentioned most frequently by respondents in the $1 million-plus private and academic organizations are shown in Table V-35. Noteworthy differences in emphasis from the areas just described occur in the private sector where a greater number of large organizations mentioned race and minority relations, instructional methods, and demographic analyses, and in the academic sector where vocational education and special needs receive increased emphasis.

In sum, there is a striking similarity between ARROE's findings and the NIE product analysis. Both show that basic skills, education and work (i.e., vocational, career and cooperative education), education equity (including providing equitable opportunities for special target groups) and, to some extent, teacher training are major concerns. A new direction emerging from the ARROE data is a concern with enrollment forecasts and demographic analyses. All of these issues reflect several factors of current importance in education: the push toward minimal competency and accountability, the concern with providing job-related skills, the emphasis on mainstreaming and other equity-related issues, and declining enrollment trends.

3. Working Arrangements

While over 2,400 education RDD&E performers were identified by this study, the great majority of these organizations are

TABLE V-35

AREAS MENTIONED MOST FREQUENTLY BY $1 MILLION-PLUS ORGANIZATIONS AS PRIMARY TOPICS OF EDUCATION RDD&E WORK, PRIVATE AND ACADEMIC SECTORS

Areas	Sector	
	Private %	Academic %
Evaluation		
Project & Program Evaluation	82	63
Learning Outcomes	67	48
Tests & Measurements	52	41
Teacher Performance	-	50
Basic Skills		
Reading & Language Arts Curriculum	36	-
Special Needs		
Of Mentally Handicapped	-	52
Of Emotionally Handicapped	-	50
Administration		
Education Administration & Organization	58	46
Demographic Analyses	36	-
Other Areas		
Vocational, Career & Cooperative Education	58	56
Teacher Education	39	56
Race & Minority Relations	46	-
Instructional Methods	36	44
Instructional Systems Design	36	-
Guidance & Counseling	-	44
Child & Adolescent Development	-	41

small, both in expenditures and staff size. In view of this situation, the extent to which organizations pool their capabilities by joining together to help each other perform education RDD&E projects and other activities is a matter of interest.

Based on responses from 96 percent of the organizations, about one-half of the group as a whole (and of each sector) participated in an education consortium during their last fiscal year (Table V-36). (A "consortium" was defined as a group of otherwise independent organizations which are formally associated for purposes such as sharing research facilities, conducting projects, disseminating research, etc.) Involvement in consortia was about the same for education RDD&E specialist organizations (47%), other RDD&E specialists (42%) and non-RDD&E groups (46%). However, almost two-thirds (62%) of the large organizations were consortia participants. Thus, it would seem that consortia arrangements do not necessarily benefit the smallest and weakest participants in the system, but add further strength to those organizations that have already achieved dominance (Figure V-9).

ARROE data suggest, then, that interorganizational links are commonplace. However, since only one "consortia" item was asked, the types of projects and the kinds and amounts of resources involved remain unknown.

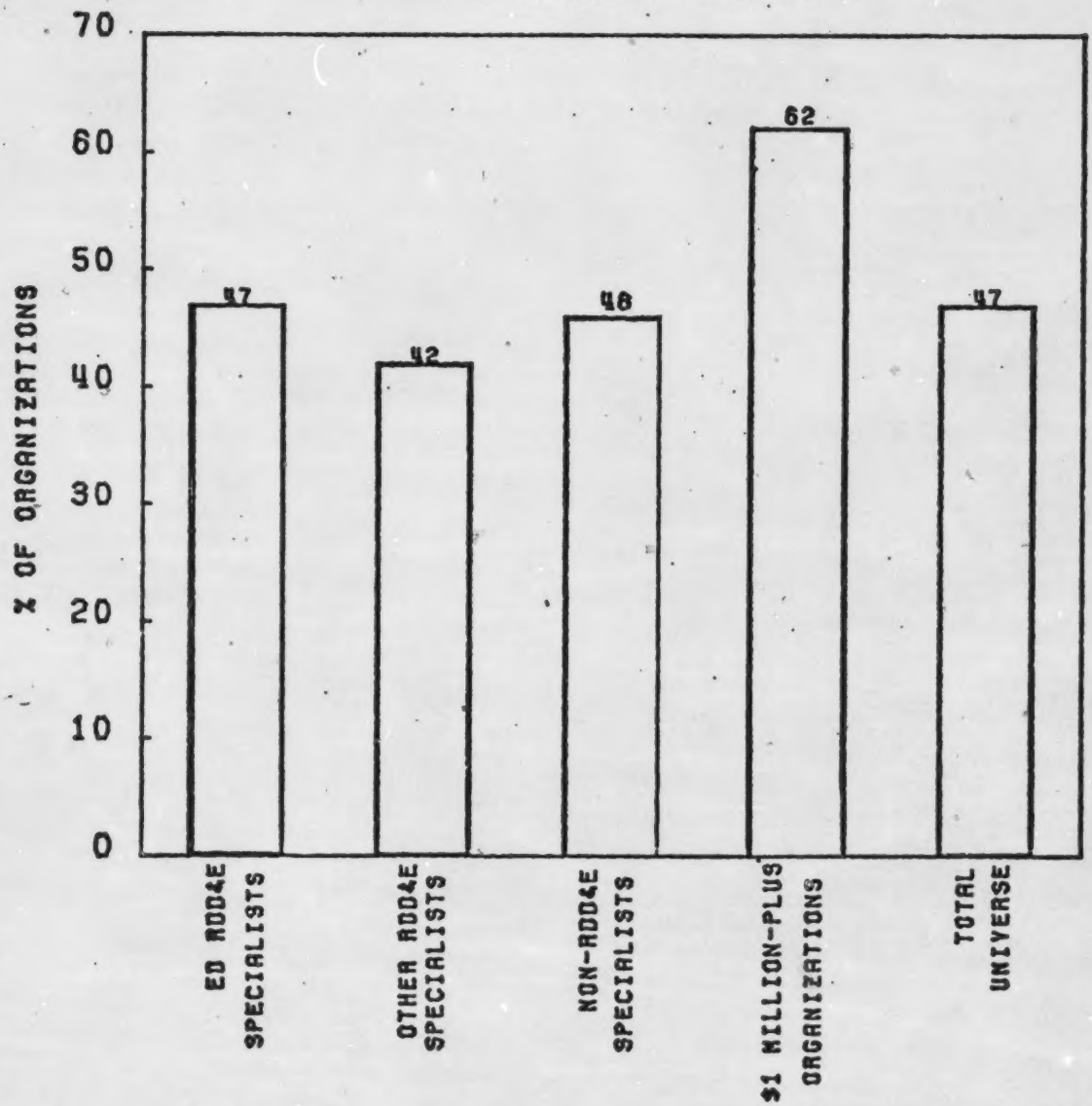
TABLE V-36

NUMBER AND PERCENT OF ORGANIZATIONS THAT PARTICIPATE IN CONSORTIA, BY SECTOR

	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Member.	(133)	26	(53)	37	(119)	26	(347)	29	(652)	28
Administrator	(6)	1	(1)	1	(18)	4	(19)	2	(44)	2
Both.	(116)	22	(18)	12	(80)	17	(181)	15	(395)	17
None of the above	(264)	51	(72)	50	(244)	53	(667)	55	(1247)	53
Number of Organizations Responding	(519)	100	(144)	100	(461)	100	(1214)	100	(2338)	100
Number of Missing Cases	(18)		(7)		(17)		(54)		(96)	
Total (N)	(537)		(151)		(478)		(1268)		(2434)	

FIGURE V-9

PARTICIPATION IN CONSORTIA
BY ORGANIZATIONAL TYPE



4. Dissemination Of RDD&E Results

As indicated several times in this report, dissemination appears to be a lower priority in comparison to other RDD&E functions. One-half of the organizations in each sector spent 10 percent or less of their education RDD&E funds for dissemination, which is the lowest of the "median percents" for all functions. Further, only 7 percent of the group spent more than half of their funds on dissemination activities, and only between 5 and 10 percent classified a majority of their full-time staff as "disseminators" (data not presented in tabular form). Again, these percents are lower than the comparable figures for the other RDD&E functions. Of course, these findings are not especially surprising, for, to use an analogy, one would not expect the shipping room to be the biggest activity of a factory.

The mail questionnaire data shown in Table V-37 (which represent responses from 44% of all performers) are an indication of the types of products produced by organizations to disseminate the results of RDD&E work. [47] The most pervasive method, by far, is the research report or monograph, used by nearly two-thirds of the organizations. Overall, roughly half

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47. The questionnaire item asked about the kinds of products produced for dissemination purposes. However, some respondents may have checked certain products--e.g., magazines--although they do not produce them, but, rather contribute to them.

TABLE V-37

PRODUCTS PRODUCED BY ORGANIZATIONS TO DISSEMINATE RDD&E RESULTS, BY SECTOR

Product	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Newsletters, brochures. . .	(97)	52	(50)	45	(119)	61	(244)	42	(510)	48
Journals, magazines	(15)	8	(10)	9	(47)	24	(176)	30	(248)	23
Books	(6)	3	(12)	11	(68)	35	(149)	26	(235)	22
Product catalogues.	(19)	10	(25)	23	(50)	26	(91)	16	(185)	17
Research reports, monographs.	(103)	56	(73)	66	(129)	66	(376)	65	(681)	64
Audio-visual materials. . .	(39)	21	(25)	23	(54)	28	(146)	25	(264)	25
Computer tapes.	(30)	16	(24)	22	(24)	12	(73)	12	(151)	14
R&D dissemination meetings.	(97)	52	(59)	54	(93)	48	(249)	43	(498)	46
Other	(24)	13	(16)	14	(32)	16	(94)	16	(166)	15
Total (N)[a]	(185)	100	(110)	100	(194)	100	(582)	100	(1071)	100

[a]Mail questionnaire respondents only.

of the group prepares a newsletter or brochure, and about half carry out R&D dissemination meetings or workshops. Finally, about one-fifth to one-quarter of the organizations disseminate R&D results via audio-visual materials, journals, magazines and books.

In addition to these general findings, there are some sector preferences. Over 60 percent of the private sector organizations reported producing newsletters or brochures, suggesting that corporate capability or publicity materials may have been included in that category. The extensive use of R&D workshops by the public education agencies may indicate that teacher-in-service meetings are an important means of disseminating results directly to practitioners. Noteworthy also is the rather widespread availability of computer tapes as a medium for external dissemination of information by public education agencies.

5. Summary

ARROE's major findings concerning education RDD&E projects and related activities are:

- Approximately 26,000 projects were reportedly conducted by organizations in all sectors, with the number of projects found in any one sector roughly in proportion to the number of organizations in that sector.
- With the exception of the large public education sector, half of the organizations in each sector conducted less than and half at least three or four projects during their last completed fiscal year. (The "median" number of projects for the large public education organizations was nine.)
- Based on mail questionnaire responses, the typical project for most organizations was small, with 43 percent reporting

that their typical project was $10,000 or less. However, private sector organizations usually had larger projects as the norm; over one-quarter of that group reported typical projects in the $100,000+ range.

- Not surprisingly, the large ($1 million-plus) organizations conduct more projects than is characteristic of their smaller counterparts. However, typical project sizes are larger only in the private and academic sectors.

- According to mail questionnaire respondents, the topics towards which large numbers of organizations direct their efforts include: project and program evaluation, basic skills, needs of special target groups (such as gifted, handicapped and bilingual students), demographic analyses, vocational, career, cooperative education, teacher education, education administration and curriculum development. These areas reflect elements of current importance in education, such as the emphasis on providing students with certain minimal competencies and job-related skills and the concern with equity-related issues and with declining enrollments.

- About one-half of the group participated in an education-related consortium during their last fiscal year, a finding of potentially great importance in view of the generally small size of the individual organizations.

- Based on responses from mail questionnaires, the method most commonly used to disseminate the results of RDD&E activities is the research report or monograph. Newsletters and brochures, and R&D meetings and workshops are also commonly used.

VI. CONCLUSIONS AND RECOMMENDATIONS

This report has presented a broadly descriptive picture of the institutions and organizations that perform education research and related activities in the United States. Our attempt at carrying out a full inventory of all organizations--like all such efforts--undoubtedly failed to include a number of organizations whose existence a more diligent search might have uncovered, and many of the organizations included in the study provided us with only sketchy data, despite our energetic pursuit of reluctant respondents.

Still, despite its limitations, the information at hand does suggest some questions that should be addressed by persons with authority to influence the future course of the education RDD&E enterprise in this country. We begin this chapter by raising those questions.

Secondly, not all of the wealth of data gathered by ARROE could be carefully analyzed within the time frame of the project. Therefore, we include in this chapter our suggestions for additional analyses to be done using the existing data.

Finally, recommendations are made for new studies building upon the information we have gathered.

A. Policy-Related Questions

1. Is The Concentration Of Expenditures In A Relatively Few Organizations Desirable?

The ARROE finding which seems most unambiguous is the concentration of the bulk of research expenditures in a relatively small number of organizations (and institutions), and in organizations which by and large do not specialize exclusively in this activity. Although ARROE identified over 2,400 organizations that had conducted some RDD&E activities during their last fiscal year, the vast majority of these were small performers, with expenditures of $150,000 or less, and two or fewer full-time professional education RDD&E staff members.

A total of 172 organizations (and 163 institutions) spending $1 million or more for education RDD&E work were identified. These organizations accounted for 68 percent of all expenditures. Fewer than half (72) of them specialize in conducting research related activities, while the remainder are organizations whose primary interests lie elsewhere. In addition to universities and their teaching departments, libraries, hospitals, and accounting firms are among these major performers of education RDD&E. The total number of such organizations is not large if one considers that most states and many county and municipal systems might have been expected to

fall in this category, as would the many public and private universities with heavy commitment to teacher training.

In considering the extent to which education RDD&E resources are apparently concentrated in fewer than 200 organizations, an essential policy-related question must be addressed: is the amount of concentration evidenced by ARROE data "desirable?" At least one prominent private sector researcher, Dr. Launor Carter of System Development Corporation, has argued that it is or at least was ten years ago, at the time his remarks were made. Writing in response to a Congressional request for opinions from noted authorities regarding the quality of the education research sponsored by the Office of Education, Carter stated:

> The effectiveness of educational research may also be improved by focussing large amounts of support in a few outstanding centers rather than distributing small amounts of research money to large numbers of individual investigators. (Insistence on geographic and institutional distribution of funds dilutes the quality of programs.)[48]

On the other hand, a closer examination of the ARROE data (zeroing in on specific types of research or evaluation) might suggest that relatively few organizations have the resources and experience to undertake specialized RDD&E tasks.

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48. The Use of Social Research in Federal Domestic Programs. Part II: The Adequacy and Usefulness of Federally Financed Research on Major National Social Problems. Washington, D.C.: USGPO, 1967, p. 113.

Clearly, then, this issue is a controversial one. It merits further attention.

2: Should More RDD&E Be Conducted Within the Public Education Sector?

The public education agencies spent only about 15 percent of all education RDD&E funds reported, and employed only about 15 percent of all full-time professional staff. Nearly one-sixth of the state education agencies participating in ARROE reported no RDD&E activities of any kind; over one-third of all school systems also reported zero activities. Judging from these data, the amount of systematic RDD&E activity occuring in the public education sector is very low. Moreover, the activity that does occur is particularly dependent upon Federal support, especially in state education agencies and large school districts, where half of the reporting organizations received at least 45 percent of their funds from that source.

Yet, it can be argued that if RDD&E results are to be used, much more activity must occur in the public education arena. In support of this contention, Krathwohl has pointed out that when research is conducted by "outsiders," a perceived gap between the researcher and the practitioner develops making it more difficult for R&D results to be adopted. He cites, as an example, the developer who will not release a product until it is engineered into a 'teacher proof' package [making] the user doubly resentful, first because of the period the product is withheld from use, and, second because of the implied

incompetence which results in the need to 'teacher proof' products." [49]

Of course, researchers working in RDD&E units of local school systems can still be perceived as "outsiders." One could argue, however, that, because intra-institutional contacts are more easily arranged than inter-institutional ones, locally-based research has more potential than research coming from "outside" settings for involving teachers more closely in the R&D process (and, conversely, researchers more closely in the teaching process), thus bridging the researcher-practitioner gap.

An additional argument in favor of locally-based R&D is that RDD&E divisions of public education agencies can be immediately responsive to high priority local needs, as expressed by school board members, administrators, teachers and the community. The importance of focusing efforts on local needs is underscored in a recently completed Rand Corporation study of Federally funded "change agent" programs (such as Right-to-Read and the Title III and VII programs). Rand researchers concluded that the extent to which an innovation is adopted is at least partially dependent upon the extent to which it represents a district and school priority. When this element

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49. Krathwohl, D. "An Analysis of the Perceived Ineffectiveness of Educational Research and Some Recommendations. Educational Psychologist, VII, 2 (1974), p. 78.

is not in evidence, "projects are likely to break down or be implemented without significant change." [50] As further noted, "projects installed in toto from outside the district usually failed to gather LEA staff support." [51]

Finally, it is also probably true that results of locally-based evaluations can be implemented more quickly than nationally-based efforts. Therefore, unworkable educational programs or practices can be disposed of more easily.

The literature on change agents, diffusion and R&D utilization is vast, and the arguments presented here may or may not have substantial empirical support. However, whether or not they are accepted, these arguments are at least "food for thought" to be considered when assessing the implications of ARROE's public education sector findings.

B. Suggestions For Further Analyses Of The ARROE Data

Because the present report aimed at broad coverage of the topics under investigation, rather than in depth analysis, it would be unwise to draw from it sweeping conclusions about the characteristics of the universe and especially about the relationship between these characteristics and the state of the art in education RDD&E. The descriptive nature of the report

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50. Berman, P. and McLaughlin, M. Federal Programs Supporting Educational Change. Vol. IV. The Findings in Review. Santa Monica, California: The Rand Corporation, 1975, p. 20.

51. Ibid, Vol. V, p. 11.

also precluded addressing important policy questions. For this more careful analysis will be required, examining more closely specific subgroups of performers rather than the broadly aggregated set of heterogenous organizations on which this report is based.

Our specific recommendations for further analyses are as follows:

1. More sophisticated manipulations of the data base should be performed. Reaggregation of data by policy-relevant categories, as well as the development of ratio measures for the complete portions of the data set would be extremely useful.

2. There is a good deal of unanalyzed information in the data set which should be exploited. For example, information about fields of specialization and degrees held by education researchers whose specialty is in fields other than education is available but has not been analyzed to date. Other topics--for example, the types of projects conducted, and the subfields of education to which resources are allocated--have not been analyzed in depth.

3. In the <u>public education sector</u>, we suggest more detailed analysis by type of organization--i.e., SEA, ISA, large LEA and small LEA. This analysis--which, in some cases, requires aggregating data from individual organizations to the

agency level--has already been done for certain key variables (expenditures, staff and projects). Additional analyses along these lines would be useful.

4. In the academic sector, we also suggest classifying each organization by type (e.g., college; school; division/department; institute/center/office; and program) and by whether the organization is specialized to the field of education. Use of these variables would allow further study of more homogeneous groups and a better sense of the extent to which interdisciplinary approaches and knowledge from fields other than education and psychology are bought to bear upon the study of topics related to education.

5. In the private sector, we suggest further analysis along similar lines, selecting subgroups of organizations by principal activity (e.g., RDD&E, Health Care, Accounting, Data Processing, etc.). Separate analyses of the activities of profit and nonprofit organizations might also be of interest.

C. Areas For Additional Data Collection

Additional data collection from ARROE participants is greatly simplified by the existence of the current file. Items which would have generated a heavy response burden if asked of the whole universe can now be administered to a select group of respondents. Two research topics come to mind immediately.

1. Study Of Large Performers

It is clear that the issue raised earlier of the desirability of resource concentration cannot be answered with the limited data on hand; we simply don't have enough information to judge whether the particular mix of capabilities represented by large performers is adequate to meet the kinds of tasks which the organizations may be called upon to carry out. We therefore recommend further study of the "$1 million-plus" organizations, and, indeed perhaps even the "quarter million-plus" group.

Of particular interest is the question of resource allocations within these organizations. We know that while the large performers spend 68 percent of all education RDD&E funds, the employ only 30 percent of all full-time staff members. However, we do not know whether this is because more of the work is done by staff whose primary activity is in another area (teaching), because staff are paid higher salaries than in other organizations (which seems unlikely), or because a large proportion of these funds is spent for support activities such as interviewing, coding, typists, research assistants, and for computer work. In view of this ambiguity, we feel that the connection between research funding and the development of a cadre of educational researchers deserves further study.

Other areas where more information about large performers might be gathered include:

- Strengths and Weaknesses in Carrying Out Various Types of Work;
- Staffing Patterns (e.g., numbers of women and minorities employed; number of staff with teaching experience; staff mobility);
- Work Patterns (e.g., type of staff assigned to various tasks; methods used to encourage staff development);
- RDD&E Development and Specialization Patterns (decision making with respect to selection of research topics and organizational specialization); and
- Implications for Strengthening Education RDD&E (e.g., how should academic programs for training research personnel be structured to provide the skills needed in large organizations? What funding mechanisms are most productive? What should be the role of nonresearch personnel, school boards, administrators and funding agency staff in influencing the conduct of RDD&E activities?).

The above list represents potential areas that might be covered during the course of several studies. Admittedly, some of the information is sensitive and might be difficult to gather. However, data of this type are essential for a better understanding of the current status of the education RDD&E enterprise, and for assessing future needs.

2. Study Of Consortia Participation

About one-half of the ARROE respondents indicated that their organization has participated in an education R&D related consortium. Therefore, we have some evidence that the smaller organizations pool their resources from time to time, presumably increasing their capability to conduct RDD&E work. However, the extent to which consortia participation is a common practice for

each organization, rather than an occasional commitment, the kinds of resources shared, the types of projects involved, and the existence of links across sectors remain unknown. If, in fact, small organizations work together on a routine basis - (for example, take on joint projects sharing data collection and analysis tasks, etc.), our present impressions of the universe would be altered drastically. That kind of consortia participation would imply that many more organizations are capable of performing large-scale activity than the present analysis of the ARROE data suggests. In view of this potential, the "consortia issue" also merits further study.

D. Summary

Based on a review of the data collected by this project, our major recommendations can be summarized as follows:

- Careful consideration of the policy implications of ARROE's findings regarding the concentration of resources in a few organizations in all sectors, and regarding the apparent level of RDD&E activity in the public education sector;
- Additional analyses of the existing data by selecting relatively homogeneous groups for study; and
- Collection of new data for study of the large performers which are so dominant in the universe of organizations, and new data collection regarding consortia participation.

APPENDIX A

SURVEY INSTRUMENTS

1. Sample Mail Instrument
   (Private Sector)

2. Telephone Instrument

BSSR: 484-01
Winter, 1978

OMB NO. 51-S-77002
Expires 9/30/78

American Registry of Research Organizations in Education

ARE

BSSR

ARROE
1990 M Street, Northwest, Suite 700
Washington, D.C. 20036
(800) 424-9804

This report is authorized by 20 U.S.C. 1221e. While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

GENERAL INSTRUCTIONS

I. ORGANIZATIONAL CLASSIFICATION

Different versions of the ARROE questionnaire have been designed for several different classes of organizations that will figure in ARROE. You have been sent a questionnaire designed for private nonprofit and for-profit organizations and noninstructional governmental agencies.

Separate versions of the questionnaire were prepared for:

- Public and private junior colleges, 4-year colleges, universities and their divisions; and for
- State, intermediate, and local education agencies and their divisions.

If your organization would fall more appropriately in some category other than the private, please call Joanne Frankel toll free at 800-424-9604.

II. SCOPE OF THE QUESTIONNAIRE

The ARROE questionnaire seeks general information describing:

- the purposes of your organization;
- the fields in which it does RDD&E;
- how its EDUCATION RDD&E is financed;
- the size of its RDD&E staff and its members' specialties;
- the typical number, size, and duration of its EDUCATION RDD&E projects;
- the media it uses to disseminate its EDUCATION RD&E.

III. DEFINITIONS

Note that key terms used in the questionnaire (education, research, development, dissemination, evaluation and policy studies, and personnel terms) are defined in the appendix, which also gives examples of activities to be included/excluded under each category. Other terms requiring explanation are footnoted in the body of the questionnaire.

IV. IDENTIFYING THE APPROPRIATE RESPONDING UNIT

As explained in the cover letter, the goals of this survey are to identify for inclusion in a Registry organizations that perform education research, development, dissemination, and evaluation and policy studies (RDD&E), and to gather some information describing these organizations. Each organization listed should have the following characteristics:

1. distinct identity (i.e., a consistently used name and address);
2. involvement in EDUCATION RDD&E during at least one of the fiscal years 72-76, and/or during its most recently completed fiscal year; and
3. appreciable autonomy from higher levels of authority in managing and carrying out EDUCATION RDD&E activities.

The organization named on the mailing label is part of a computerized listing formed by searching records of recipients of Federal and foundation EDUCATION RDD&E contracts and grants. However, the information used to generate our labels may not have in all instances identified the most appropriate part of your organization for Registry listing, according to the criteria just described. (For example, the entity named may have subdivisions meeting our criteria, one or more of which should be listed individually; or, the entity may itself be a subdivision of a larger organization which would be more appropriate for Registry description.) Therefore, keeping our criteria in mind, please use the mailing label as a starting-off point to identify the organization most appropriate for Registry description.

To differentiate between open and confidential data, this questionnaire uses a system of unshaded vs. shaded answer spaces. Any information which you enter in shaded spaces is for statistical analysis or internal bookkeeping only and will not be associated with the name of your organization. For some questions you have the choice of answering in **either** a shaded or an unshaded space. This is the information which NIE would like to use as descriptors of your organization in its **Registry.** If you are willing to have these descriptors associated with the name of your organization in the **Registry**, enter your answers in the unshaded areas. If you do not wish the descriptors used in association with your organization name, enter your answers in the **shaded** areas. These data will then be treated confidentially and used solely for aggregate statistical analyses. If you answer **only shaded** items, your organization will not be included in the **Registry** at all, but we nonetheless would appreciate receiving your responses for statistical purposes.

Please route this questionnaire to the office and person who can best provide this information.

If you have any questions or need help call Joanne Frankel toll free at (800) 424-9804

INFORMATION ENTERED IN SHADED ANSWER SPACES WILL BE TREATED CONFIDENTIALLY

A. ORGANIZATIONAL IDENTIFICATION

1. Did this organization perform any education research, development, dissemination, or evaluation and policy studies (RDD&E) during its most recently completed fiscal year? (*Check one box. Include both internally and externally funded activities.*)

   Yes (*SKIP TO INSTRUCTIONS ABOVE Q.4*)..... ☐ 0
   No ..... ☐ 1 12/2

2. Did this organization perform any EDUCATION RDD&E during any one of the fiscal years 1972 through 1976?

   Yes ..... ☐ 0
   No ..... ☐ 1 13/2

   IF NO: PLEASE RETURN THIS QUESTIONNAIRE TO US SO THAT WE WILL KNOW THAT YOUR ORGANIZATION NEED NOT BE CONTACTED IN OUR FOLLOW-UP OF NONRESPONDING RECIPIENTS.

3. Even though it did not perform any EDUCATION RDD&E work during its most recently completed fiscal year, does this organization currently possess a capability and interest in performing such work?

   Yes (*PLEASE COMPLETE Qs. 4-8 IN THIS SECTION, AND RETURN THIS QUESTIONNAIRE TO US. DO NOT FILL IN THE REST OF THE QUESTIONNAIRE. YOU WILL BE PLACED ON NIE's MAILING LIST FOR NOTIFICATION OF FUTURE GRANTS, STUDIES, ETC.*)..... ☐ 0

   No (*PLEASE STOP HERE AND RETURN THIS QUESTIONNAIRE TO US.*) ..... ☐ 1 14/2

Please verify that the name and address of your organization are shown correctly on the cover. (Please include acronym, if desired.) Make any changes directly on the cover. Please supply the information requested in Qs. 4, 5, 6 and 7 as you wish it to appear in the **REGISTRY** for your organization. If you do not wish to be included in the **REGISTRY** please SKIP TO Q. 8.

4. Telephone number of your organization (*Include area code*): _____

5. Director/Head (*Please list no more than two persons*):

   _____
   NAME TITLE

   _____
   NAME TITLE

6. Please indicate the name, director/head, and year organized of any divisions of the organization which specialize in EDUCATION RDD&E activities.

DIVISION NAME	DIRECTOR	YEAR ORGANIZED

7. Purpose (*Please describe as briefly as possible the major aims and activities of the organization AS THEY RELATE TO EDUCATION RDD&E*):

_____

_____

_____

_____

8. Name, title and phone number of person filling out this questionnaire:

NAME	
TITLE	
PHONE	

INFORMATION ENTERED IN THE SHADED ANSWER SPACES WILL BE TREATED CONFIDENTIALLY

B. GENERAL CHARACTERISTICS

9. In what calendar year was your organization founded as it exists in its present form (i.e. with its current legal status, or major organizational mission)? 15/1

Year founded: ☐☐☐☐ 16-19/9

10. Was there some predecessor(s) or was it a totally new organization? (*CHECK ONE BOX ONLY.*)

Some predecessor(s) ..... ☐ 0
Totally new organization (*SKIP TO Q. 12*) ..... ☐ 1 20/2

11. By what process did your organization come into its present form? (*CHECK ONE BOX ONLY.*)

Formed wholly or partially by merger of previous units ..... ☐ 0
Formed wholly or partially by division of or split-off from previous units . ☐ 1
Other (*Please Specify*) _____
_____ ... ☐ 2 21/3

12. Is there a previous institutional name (or names) under which research documents from your organization may have been published during the past five years? 22/1

Yes ..... ☐ 0
No (*SKIP TO Q. 14*) ..... ☐ 1 23/2

13. What was that previous name(s)? (*ONLY FOR REGISTRY*)

_____
_____

14. Many of the following questions in this form will refer to your organization's MOST RECENT, COMPLETED FISCAL YEAR. Please indicate the dates of that year.

It began on: ☐☐ ☐☐ ☐☐ 24-29/9
Month Day Year

It ended on: ☐☐ ☐☐ ☐☐ 30-35/9
Month Day Year

15. During its past fiscal year, was EDUCATION RDD&E the sole, or major, activity of your organization? 36/1

Yes (*SKIP TO Q. 19*) ..... ☐ 0
No ..... ☐ 1 37/2

16. During its past fiscal year, was RDD&E the sole or major activity of your organization? 38/1

Yes (*SKIP TO Q. 18*) ..... ☐ 0
No ..... ☐ 1 39/2

17. What was the principal activity of your organization during that year? (*CHECK ONE BOX ONLY.*) 40/1

Private school	☐☐	00
State, local or tribal government planning or administration body	☐☐	01
Social action or civic association	☐☐	02
Professional trade association, labor union	☐☐	03
Publishing, broadcasting, audio-visual production	☐☐	04
Management consulting	☐☐	05
Computer services	☐☐	06
Library or information services	☐☐	07
Architecture, design, planning	☐☐	08
Health care	☐☐	09
Child care	☐☐	10
Manufacturing	☐☐	11
Advertising, marketing or public relations services	☐☐	12
Accounting	☐☐	13
Other (*Please Specify*) _____ _____	☐☐	14 41-42/15

18. Considering all the RDD&E activities of your organization during its past completed fiscal year, to which of the following concerns were they most pertinent? (*CHECK AS MANY AS APPLY.*) 43/1

Basic Science	☐☐	1	44/0
Business and Economics	☐☐	1	45/0
Communications	☐☐	1	46/0
Defense	☐☐	1	47/0
Education	☐☐	1	48/0
Environment (including energy development, pollution control, weather and climate)	☐☐	1	49/0
Health (including disease control, mental health, drug and alcoholism prevention)	☐☐	1	50/0
International Cooperation and Development	☐☐	1	51/0
Manpower Development	☐☐	1	52/0
Public Administration, Law, Justice	☐☐	1	53/0
Space	☐☐	1	54/0
Transportation	☐☐	1	55/0
Urban Planning and Development	☐☐	1	56/0
Other (*Please Specify*) _____ _____	☐☐	1	57/0

19. During its past fiscal year, did your organization belong to or administer one or more EDUCATION RDD&E RELATED CONSORTIA[1] or other formal EDUCATION RDD&E networks? (*CHECK ONE BOX ONLY.*) 58/1

Was a member of a consortium	☐☐	0
Was an administrator of a consortium	☐☐	1
Was both a member and an administrator of a consortium	☐☐	2
None of the above (*SKIP TO Q. 21*)	☐☐	3 59/4

20. During that year did your organization participate in education-related consortia on a short-term project by project basis, or on a long-term basis? 60/1

On a project by project basis	☐☐	0
On a long-term basis	☐☐	1
Both	☐☐	2 61/3

[1]By "consortia" we mean groups of otherwise independent organizations which are formally associated for purposes such as conducting particular research projects, sharing research facilities, or disseminating their research.

21. During the past fiscal year, was your organization a separately organized subsidiary of any "parent" organization?

Yes ..... ☐ 0
No (*SKIP TO Q. 23*) ..... ☐ 1 62/2

22. Please indicate whether authority for the following responsibilities rests solely with your organization, is held jointly, or rests solely with your parent organization.

	AUTHORITY RESTS SOLELY WITH YOUR ORGANIZATION	JOINT AUTHORITY	AUTHORITY RESTS SOLELY WITH PARENT ORGANIZATION	
The appointment of your organization's director or head	☐ 0	☐ 1	☐ 2	63/3
The responsibility for initiating research projects	☐ 0	☐ 1	☐ 2	64/3
The responsibility for raising funds for research projects ...	☐ 0	☐ 1	☐ 2	65/3
Setting the conditions of employment for professional staff	☐ 0	☐ 1	☐ 2	66/3

23. Is your organization legally defined as for-profit, as nonprofit or not-for-profit, or as a state or local government body? 67/1

For-profit ..... ☐ ☐ 0
Nonprofit or not-for-profit ..... ☐ ☐ 1
State or local government body ..... ☐ ☐ 2 68/3

INFORMATION ENTERED IN SHADED ANSWER SPACES WILL BE TREATED CONFIDENTIALLY

C. FUNDING FOR RDD&E

24. What were the TOTAL OPERATING EXPENDITURES[1] for your organization for the past fiscal year? 12/1

$	$	13-20/9

25. During the past fiscal year, what was the approximate amount expended for ALL RESEARCH, DEVELOPMENT, DISSEMINATION AND EVALUATION AND POLICY STUDIES (RDD&E) by your organization? (*Chargeable overhead and indirect costs should be included in this amount. Money expended for contracts, subcontracts, etc. in RDD&E also should be included.*) 21/1

$	$	22-29/9

26. Approximately, what amount of the TOTAL RDD&E EXPENDITURES given in Q. 25 was used in each of the following categories? (*Again, chargeable overhead, indirect costs, subcontracts, etc. should be included for each category.*) 30/1

a. Education RDD&E	$	$	31-38/9
b. All other social problem oriented RDD&E	$	$	39-46/9
c. All science, technology and engineering RDD&E	$	$	47-54/9

TOTAL SAME AS Q. 25.

27. Please indicate what percentage of your organization's EDUCATION RDD&E EXPENDITURES (the amount given in Q. 26a) was used during the past fiscal year PRIMARILY for each of the following functions. (*Chargeable overhead and indirect costs should be calculated proportionately in the percentages.*) 55/1

Research	%	%	56-58/1
Development	%	%	59-61/1
Dissemination	%	%	62-64/1
Evaluation and policy studies	%	%	65-67/1
Other (*Specify*) _____	%	%	68-70/1
TOTAL	100%	100%	

28. Approximately what percentage of your organization's EDUCATION RDD&E EXPENDITURES (the amount given in Q. 26a) was used primarily for work directed to the following levels of education? (*Estimate if necessary.*) 12/1

Pre-primary	%	%	13-15/1
Elementary	%	%	16-18/1
Secondary	%	%	19-21/1
Post-secondary	%	%	22-24/1
Adult/continuing	%	%	25-27/1
Not specific to any level	%	%	28-30/1
TOTAL	100%	100%	

[1]"Total operating expenditures" refer to all charges, whether paid or unpaid, incurred during the organization's past completed fiscal year.

29. Please indicate the percentage of your organization's EDUCATION RDD&E EXPENDITURES (the amount given in Q. 26a) which came from the following sources. (*Estimate if necessary.*) 31/1

Federal government	%	%	32-34/1
State government	%	%	35-37/1
Local government	%	%	38-40/1
Private industry	%	%	41-43/1
Nonprofit association or foundation	%	%	44-46/1
Own funds	%	%	47-49/1
Other (*Specify*) _____	%	%	50-52/1
TOTAL	100%	100%	

30. During the past fiscal year to what extent did your organization use free resources in its performance of EDUCATION RDD&E? (*Include all resources that you used at no cost or at nominal cost and which were therefore not reflected in the expenditures information above. Check one box for each line.*) 53/1

	NO FREE RESOURCES USED	SOME FREE RESOURCES USED	TOTALLY DEPENDENT ON FREE RESOURCES	
Rent-free plant or maintenance	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	54/3
Free equipment or use of equipment	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	55/3
Free or nominal charge computer usage	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	56/3
Free professional labor	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	57/3
Specialized library and RDD&E information services	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	58/3
Printing and reproduction	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	59/3
Other (*Specify*) _____	☐ ☐ 0	☐ ☐ 1	☐ ☐ 2	60/3

31. Please estimate the dollar value of the free resources received during the past fiscal year as indicated in Q. 30. 61/1

$	$

62-68/9

32. Has your organization purchased or supported EDUCATION RDD&E services of other organizations during the past fiscal year, through contracts, subcontracts, grants, or other means?

Yes ☐ 0
No. (*SKIP TO Q. 34*) ☐ 1 69/2

33. Please indicate the approximate amount spent on purchase or support of EDUCATION RDD&E services performed by other organizations. 70/1

$	$

71-77/9

INFORMATION ENTERED IN SHADED ANSWER SPACES WILL BE TREATED CONFIDENTIALLY

D. RDD&E PERSONNEL

All of the questions in this section (except Qs. 39 and 40) refer to the personnel employed as regular staff members in your organization as of the LAST DAY OF THE PAST, COMPLETED FISCAL YEAR, WHO WERE PRIMARILY INVOLVED IN EDUCATION RDD&E[1] ACTIVITIES DURING THE YEAR. Count only persons who were on the payroll on that date as regular staff members.[2] Do not count consultants or other temporary employees, except in Qs. 39 and 40.

34. How many professional staff[3] persons who were primarily involved in EDUCATION RDD&E activities during the year were employed directly by your organization either full[4] or part-time?[5] 12/1

	FULL-TIME		PART-TIME		
Professional staff					13-20/9

35. How many of the full and part-time PROFESSIONAL STAFF (THE NUMBER OF PERSONS IN Q. 34) could be classified in each of the categories listed below according to their primary work activity. "The primary work activity" of a staff member refers to that activity in which he/she spends the greatest percentage of his/her working hours. (*COUNT EACH STAFF MEMBER ONCE ONLY.*) 21/1

	FULL-TIME		PART-TIME		
RDD&E planners and administrators					22-29/9
Research					30-37/9
Development					38-45/9
Dissemination					46-53/9
Evaluation and policy studies					54-61/9
Other (*Specify*). _____					62-69/9
TOTALS (*These should be the same as Q. 34*)					

[1]Persons "primarily involved in EDUCATION RDD&E" refers to persons who spend at least 50% of their working hours in EDUCATION RDD&/or E activities.

[2]"Regular staff member" refers to persons who have been or will be gainfully employed in the organization for a period of at least six consecutive months.

[3]"Professional staff" refers to persons whose work requires specialized knowledge and academic preparation equivalent to that ordinarily acquired through completion of at least a four-year college course.

[4]A "full-time staff member" is one whose total assignments require his/her services each working day at least a number of hours equal to the number of hours of a regular working day.

[5]A "part-time staff member" is one whose total assignments require less than his/her full-time services.

36. Please give the number of full and part-time professional staff (those given in Q. 34) primarily engaged in EDUCATION RDD&E in your organization whose major expertise (through training or experience) is in each of the following specialties. (*Count each professional staff member only once by assigning him or her to the one most applicable specialty.*) 12/1

	FULL-TIME		PART-TIME		
Education					13-20/9
Psychology					21-28/9
Other Social and Behavioral Sciences (e.g., Political Science, Sociology, Anthropology)					29-36/9
Humanities					37-44/9
Physical and Biological Sciences (e.g., Physics, Chemistry, Geology)					45-52/9
Math, Statistics					53-60/9
Business, Economics, Accounting, Public Administration					61-68/9
Communications, Library Science					69-76/9
Operations Research, Systems Analysis					12-19/9
Other (*Specify*) _____					20-27/9
TOTALS (*These numbers should be the same as the numbers given in Q. 34*)					

37. How many of the full and part-time professional staff (those given in Q. 34) in the organization who were primarily involved in EDUCATION RDD&E hold doctoral degrees? (*Count each staff member only once.*) 28/1

	FULL-TIME		PART-TIME		
Number with doctorates					29-36/9
If possible, please break down the number with doctorates, as follows:	FULL-TIME		PART-TIME		
Number with Ed.D					37-44/9
Number with Ph.D					45-52/9
Number with some other doctoral degree (e.g., M.D., Sc.D., etc.)					53-60/9
Number with more than one of the above degrees					61-68/9

38. How many other staff persons (not professional staff as defined in Q. 34), who were also primarily involved in EDUCATION RDD&E activities during the year, were employed directly by your organization either full or part-time? 12/1

	FULL-TIME		PART-TIME		
Other staff					13-20/9

39. During the past completed fiscal year, approximately what percentage of your organization's professional level EDUCATION RDD&E work was done by employees who were not regular staff members? (*Count consultants and other temporary employees; EXCLUDE trainees.*)

5% or less	☐	0
6 - 25%	☐	1
26% or more	☐	2 21/3

40. How many persons worked on the EDUCATION RDD&E activities covered by this report primarily for the purpose of receiving work training in RDD&E? (*Count only those trainees who participated for four work weeks or more during the fiscal year. Include both persons who were paid and those who were not paid.*) 22/1

Number of trainees 23-26/9

INFORMATION ENTERED IN SHADED ANSWER SPACES WILL BE TREATED CONFIDENTIALLY

E. RDD&E PROJECTS AND ACTIVITIES

This section asks for a description of the EDUCATION RDD&E projects conducted by your organization during the past fiscal year. If a project was staffed by people from several organizations, count the project as "yours" only if the project director worked in your organization.

41. What were the total number of EDUCATION RDD&E projects[1] in your organization which were active during part, or all, of the past fiscal year? (*Estimate if necessary. IF NONE, ENTER "0" AND SKIP TO Q. 44.*) 27/1

Number of projects 28-31/9

42. What was the typical duration (i.e., the "modal" figure) of the EDUCATION RDD&E projects active during the year? (*Please check one box only.*) 32/1

6 months or less	☐	0
7 - 12 months	☐	1
13 - 24 months	☐	2
25 - 36 months	☐	3
Over 36 months	☐	4 33/5

43. What was the typical dollar amount of the EDUCATION RDD&E projects active during the fiscal year (i.e., the "modal" figure)? (*Please check one box only.*) 34/1

$2,000 or less	☐	0
$2,001 - $10,000	☐	1
$10,001 - $20,000	☐	2
$20,001 - $50,000	☐	3
$50,001 - $100,000	☐	4
$100,001 - $500,000	☐	5
More than $500,000	☐	6 35/7

[1]A "project" is an activity which has an assigned staff and is directed toward a specific RDD&E problem or topic. It is conducted within a specific time limit, rather than being an ongoing service.

44. During the past fiscal year, to which problem areas were the EDUCATION RDD&E activities of your organization PRIMARILY directed?
(Check all that apply.) 36/1

ADMINISTRATION, PLANNING, AND POLICY ☐ ☐ 1 37/0
Economics of education, school finance ☐ ☐ 1 38/0
Education administration and organization ☐ ☐ 1 39/0
Enrollment analysis and forecasting ☐ ☐ 1 40/0
Personnel recruitment and utilization ☐ ☐ 1 41/0
Project and program evaluation ☐ ☐ 1 42/0
Teacher education ☐ ☐ 1 43/0
Teacher performance ☐ ☐ 1 44/0
Other administration etc. (*Specify*) _____ ☐ ☐ 1 45/0

FACILITIES ☐ ☐ 1 46/0
Architecture design ☐ ☐ 1 47/0
Audio-visual equipment and facilities ☐ ☐ 1 48/0
Computers and computer use ☐ ☐ 1 49/0
Other educational technology (*Specify*) _____ ☐ ☐ 1 50/0

CURRICULA ☐ ☐ 1 51/0
General curriculum development ☐ ☐ 1 52/0
Specific curricula ☐ ☐ 1 53/0
English and speech ☐ ☐ 1 54/0
Fine arts ☐ ☐ 1 55/0
Foreign languages ☐ ☐ 1 56/0
Health and safety ☐ ☐ 1 57/0
Mathematics ☐ ☐ 1 58/0
Natural science ☐ ☐ 1 59/0
Physical education ☐ ☐ 1 60/0
Reading, language arts ☐ ☐ 1 61/0
Social studies and social sciences ☐ ☐ 1 62/0
Other curricula (*Specify*) _____ ☐ ☐ 1 63/0

Professional Education:
Engineering and architecture ☐ ☐ 1 64/0
Law ☐ ☐ 1 65/0
Teaching ☐ ☐ 1 66/0
Other professional education (*Specify*) _____ ☐ ☐ 1 67/0

Vocational, career, and cooperative education ☐ ☐ 1 68/0

INSTRUCTION ☐ ☐ 1 12/0
Audio-visual methods ☐ ☐ 1 13/0
Computer-assisted instruction ☐ ☐ 1 14/0
Instructional systems design ☐ ☐ 1 15/0
Instructional methods ☐ ☐ 1 16/0
Special Needs:
Bilingual ☐ ☐ 1 17/0
Gifted and talented ☐ ☐ 1 18/0
Emotionally handicapped ☐ ☐ 1 19/0
Mentally handicapped ☐ ☐ 1 20/0
Physically handicapped ☐ ☐ 1 21/0
Other special needs (*Specify*) _____ ☐ ☐ 1 22/0

GUIDANCE AND COUNSELING ☐ ☐ 1 23/0

PSYCHOLOGICAL ASPECTS ☐ ☐ 1 24/0
Attitudinal and motivational studies ☐ ☐ 1 25/0
Child and adolescent development ☐ ☐ 1 26/0
Learning outcomes; academic performance ☐ ☐ 1 27/0
Psychology of learning ☐ ☐ 1 28/0
Psychometric methods; tests and measurement ☐ ☐ 1 29/0
Talent and creativity ☐ ☐ 1 30/0
Other psychological aspects (*Specify*) _____ ☐ ☐ 1 31/0

SOCIAL ASPECTS ☐ ☐ 1 32/0
Demographic analyses ☐ ☐ 1 33/0
Delinquency, security ☐ ☐ 1 34/0
Classroom climate, discipline ☐ ☐ 1 35/0
Institutional, comparative and historical studies ☐ ☐ 1 36/0
Occupational outcomes ☐ ☐ 1 37/0
Race and minority relations ☐ ☐ 1 38/0
School-community relations ☐ ☐ 1 39/0
Other social aspects (*Specify*) _____ ☐ ☐ 1 40/0

OTHER APPLICATIONS (*Specify*) _____ ☐ ☐ 1 41/0

45. Which of the following types of products or activities does your organization produce to disseminate the results of its EDUCATION RD&E work to audiences outside the organization? (*Check as many as apply.*)

a. Newsletters or brochures ☐ ☐
b. Journals or magazines ☐ ☐
c. Books ☐ ☐
d. Bibliography or catalog of R&D products ☐ ☐
e. Research reports or monographs ☐ ☐
f. Audio-visual materials ☐ ☐
g. Computer tapes or programs ☐ ☐
h. R&D dissemination meetings or workshops ☐ ☐
i. Other (*Specify*) _____ ☐ ☐
j. None (*SKIP TO Q. 48*) ☐ ☐

46. Please make the entries below for those types of products or activities you wish mentioned in the **REGISTRY.** (*If you do not wish any types of products or activities mentioned, SKIP TO Q. 48.*)

PRODUCT/ACTIVITY TYPE (USE LETTERS a-i FROM Q. 45 CATEGORIES)	TO WHOM AVAILABLE "ALL" OR "RESTRICTED"	TERMS "SUBSCRIPTION," "SALE" OR "FREE"
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

47. Please give address for inquiries or requests for products listed above, if different than address given on the front cover.

_____
_____
_____

48. Approximately how much time was required to complete this questionnaire?

Hours	Minutes

42-45/0

APPENDIX

The following is a list of definitions of the key terms used in the questionnaire.

EDUCATION

ACTS AND PROCESSES OF SYSTEMATIC INSTRUCTION. Education includes the imparting and acquisition of skills and knowledge, the development of general powers of reasoning and perception, and the fostering of motivation, attention, attitudes and behavior supportive of learning. Also included are services which are provided to the community at large in order to enhance individuals' opportunities for career or professional advancement. EXCLUDED from the definition are: (1) training in vocational skills which can be used ONLY WITHIN the organization paying for or doing the training. (For example, training of military personnel in repairing tanks is not included as education but a general literacy course for soldiers is included); and (2) any transfer of useful information not set in the overall context of desiring specific outcomes in a "student" population. (For example, T.V. shows and museum exhibits aimed at the general public are excluded.)

EDUCATION RDD&E

The survey focuses on education research, development, dissemination, and evaluation and policy studies (RDD&E), not on education itself.

In order to be called education RDD&E, an activity must satisfy any of three criteria: (1) there is an explicit focus on education as defined here, or on economic, political, social, cultural, legal or other forces as they influence it or are influenced by it; (2) there is strong PRIMA FACIE evidence of relevance to education, e.g., work on testing theory and measurement, the concept of readiness, heritability of IQ; (3) there is an explicit claim to relevance in education, e.g., inquiry in theoretical linguistics proposing applicability of its findings to bilingual education. EDUCATION RDD&E of interest in the survey comprises any of the following activities to which staff time is formally assigned:

RESEARCH is systematic study and investigation undertaken to establish new facts or principles. No distinction will be made between basic and applied research.

Include: Critical reviews, syntheses, knowledge codification

Inquiries into professional education, e.g. for health, law, social, work, engineering — requirements, curricula, contents, etc.

Exclude: The writing of textbooks (enter under Development)

DEVELOPMENT is the disciplined invention or improvement, design, and testing of generalizable solutions to problems taking the form of products, materials, models, or practices.

Include: Invention of solutions to operating problems

Development of innovative programs through systematic evaluation

Development of curricula, and instructional systems

Development of instructional products (e.g., textbooks, games)

Development of standardized test materials, including validation and field testing

Exclude: Demonstrations whose aim is "to convince" rather than to TEST new models or approaches (enter under Dissemination)

DISSEMINATION for purposes of the survey refers to programs of activity, or projects specifically designed to make available, make known to interested or potential audiences, or put into use, the results of any R&D activity. Included are publications, conferences, meetings, demonstrations and demonstration projects which are designed to show the method of operation or application of an R&D outcome; adoption and implementation activities; and the organized fostering of capacity to engage in such dissemination activities.

Include: Demonstrations based on R&D results whose aim is to "convince" rather than to "test," by showing operations of innovative practices or programs in natural settings

Workshops focused on SPECIFIC innovations

Special, temporary programs which support the implementation of recent innovations until they can become fully operational on their own

R&D information systems and programs

"Show-and-tell" sessions for policy advocacy or budget information, and "how-to-do-it" sessions but only as these relate to R&D activities

Marketing innovations as products of R&D

Exclude: Preservice education workshops

General inservice workshops

Regular management information systems, mailing label systems, etc.

EVALUATION AND POLICY STUDIES are systematic inquiries specifically addressed to policy makers and intended to inform their major policy decisions. Subsumed are assessments of operations and effects of RDD&E-based programs, determination of the feasibility of new programs and projects, and studies focusing on needs, goals, and priorities for action regarding ongoing or contemplated activities.

Exclude: Statistical studies which gather, analyze, and publish CENSUS-TYPE data on students, teachers, educational expenditures, etc., UNLESS such studies are designed as a unique research effort, not a part of ongoing operational activities.

OMB No. 51-S-77002
Expires: 9/30/78

BSSR:484-06 1-5

ID NO 6-11

INITIATING EVENT: _____

AMERICAN REGISTRY OF RESEARCH AND RESEARCH-RELATED ORGANIZATIONS IN EDUCATION: Telephone Questionnaire

RECORD CHANGES IN ADDRESSEE, ORG NAME, ETC. HERE

ADDRESSEE: _____

SUBORGANIZATION: _____

ORGANIZATION: _____

ADDRESS: _____
Number Street

_____
City State Zip

PHONE: _____

IF Q'RE WAS FORWARDED OR ORG TO BE COVERED BY SOMEONE ELSE, RECORD NEW ORG HERE

ID NO

ADDRESSEE: _____

SUBORGANIZATION: _____

ORGANIZATION: _____

ADDRESS: _____
Number Street

_____
City State Zip

Phone: _____

EVENT CODE	YEAR	DAY	MODIFIER
	78		
	78		
	78		
	78		

1. PRELIMINARIES

a. INTRODUCTION: EXPLAIN THAT YOU ARE FROM THE BUREAU OF SOCIAL SCIENCE RESEARCH AND ARE CALLING ABOUT THE ARROE--AMERICAN REGISTRY OF RESEARCH AND RESEARCH-RELATED ORGANIZATIONS IN EDUCATION--QUESTIONNAIRE.

b. DETERMINE IF ORGANIZATION RECEIVED MATERIALS AND IDENTIFY APPROPRIATE RESPONDENT:

- IDENTIFY RESPONDENT BY ASKING, AS APPROPRIATE, TO SPEAK TO:

  1) PERSON WHO IS WORKING ON THE QUESTIONNAIRE, OR

  2) PERSON OR TITLE GIVEN ON SURVEY LIST AS THE "ADDRESSEE," OR

  3) PERSON WHO CAN TELL YOU ABOUT THE EDUCATION-RELATED RESEARCH CONDUCTED BY THE ORGANIZATION.

  ENTER THE NAME OF THE RESPONDENT ON THE COVER SHEET, IF IT IS DIFFERENT THAN THE "ADDRESSEE" ON OUR LIST.

- CODE RECEIPT OF MATERIALS.

  Yes (CONTINUE WITH Q. 2). 0

  No (GO TO Q. 3) 1

  Don't know (GO TO Q. 3) 2

2. WHEN YOU HAVE REACHED RESPONDENT, SAY: When do you think you will have the questionnaire completed and will be mailing it in?

Date: _____

IF DEFINITE DATE ONE WEEK OR SOONER IS GIVEN, ASK IF YOU CAN GIVE ANY HELP, THANK TO END INTERVIEW, AND PUT IN "TO BE CALLED" FILE.

IF INDEFINITE DATE OR LONGER THAN ONE WEEK GIVEN, OR IF R HASN'T DECIDED WHETHER TO COMPLETE QUESTIONNAIRE, SAY: We are trying to get some preliminary data assembled on organizations before questionnaires will be in and would appreciate it if you would give us some information over the phone. It should take about 5-20 minutes, depending on the questions we need to ask. (GO TO Q. 3)

3. EXPLAIN PURPOSE OF STUDY TO RESPONDENTS WHO HAVE NOT SEEN THE QUESTIONNAIRE. SAY: We are conducting this survey for the National Institute of Education, an agency of the Federal government. Our goals are to identify organizations that perform any activities related to education R&D, and to gather some information about them..

THEN, SAY TO EVERYONE: First, I'd like to verify that I have the correct name and address for your organization. (READ NAME AND ADDRESS. ENTER CORRECTIONS ON COVER SHEET.)

4. For the purposes of this survey, we are classifying organizations into various categories. Have we classified your organization correctly as: (READ THE CIRCLED CATEGORY)

(PRIVATE SECTOR) being in the sector which includes private nonprofit and for-profit organizations, and noninstructional governmental agencies 1

(ACADEMIC SECTOR) an academic institution or unit or affiliate of an academic institution. 2

(PUBLIC EDUCATION SECTOR--AGENCY LEVEL) an intermediate education agency, or a local education agency with an enrollment smaller than 50,000 students 3

(PUBLIC EDUCATION SECTOR--AGENCY LEVEL) a state education agency, or a local education agency with an enrollment of 50,000 students or greater. 4

(PUBLIC EDUCATION SECTOR--UNIT) an operating unit (department, school, center, lab) of a state, intermediate or local education agency. 5 12/

IF NO: The other categories are (READ THE OTHER DESCRIPTIONS AND CIRCLE THE SECTOR THE RESPONDENT IDENTIFIES. FOLLOW THE QUESTIONNAIRE SKIP PATTERNS ACCORDINGLY.)

FOR SOURCE LIST 2 & 3, (NIE Lists), SAY

5. We have contacted your organization becuase it was on a list of organizations that had received grants or contracts for education research, development, dissemination, evaluation and policy studies (RDD&E) during the past several years. Did [ENTITY] perform any education RDD&E during its most recently completed fiscal year? Include both internally and externally funded activities.

Yes (GO TO STATEMENT ABOVE Q. 9). 0

No (MAKE SURE BY GIVING NAME OF PRINCIPAL INVESTIGATOR. IF STILL NO, ASK Q. 6). 1

FOR SOURCE LIST 1, (ISI List), SAY

5. We have contacted your organization becuase one or more authors of publications in education research, development, dissemination, or evaluation and policy studies (RDD&E) listed it as their organizational affiliation. Did [ENTITY] perform any education RDD&E during its most recently completed fiscal year? Include both internally and externally funded activities.

Yes (GO TO STATEMENT ABOVE Q. 9). 0

No (MAKE SURE BY GIVING NAME OF AUTHOR. IF STILL NO, ASK Q. 6) 1

FOR STATE EDUCATION AGENCIES AND LARGE DISTRICTS, SAY

5. We have contacted your organization because we are including all state education agencies and large districts in the survey. (GO TO Q. 9)

FOR INTERMEDIATE EDUCATION AGENCIES AND SMALL DISTRICTS, SAY

5. We are contacting local and intermediate education agencies to determine their activities in education research, development, dissemination, and evaluation and policy studies (RDD&E). Did [ENTITY] perform any education RDD&E during its most recently completed fiscal year? Include both internally and externally funded activities.

Yes (GO TO STATEMENT ABOVE Q. 9). 0

No (ASK Q. 6) 1

FOR EDUCATION AGENCY UNITS, SAY

5. We are contacting you because the name of your office was given to us by your agency, when we contacted it to ask about the education research, development, dissemination, or evaluation and policy studies (RDD&E) it conducts. Did [ENTITY] perform any education RDD&E during its most recently completed fiscal year? Include both internally and externally funded activities.

Yes (GO TO STATEMENT ABOVE Q. 9). 0

No (ASK Q. 6) 1

FOR SOURCE LIST 10 (UNITS NOMINATED BY QUESTIONNAIRE RECIPIENTS) SAY

5. We are contacting you because your organization was nominated for inclusion in the survey by another organization at your institution. Did [ENTITY] perform any education research, development, dissemination, or evaluation and policy studies (RDD&E) during its most recently completed fiscal year? Include both internally and externally funded activities.

Yes (GO TO STATEMENT ABOVE Q. 9). 0

No (ASK Q. 6) 1

6. Did your organization perform any education RDD&E during any one of the fiscal years 1972 through 1976?

Yes (ASK Q. 7). 0

No (THANK RESPONDENT AND END INTERVIEW). 1

7. Even though it did not perform any education RDD&E work during its most recently completed fiscal year, does your organization currently possess a capability and interest in performing such work?

Yes (ASK Q. 8). 0

No (THANK RESPONDENT AND END INTERVIEW). 1

8. SAY: One of the purposes of this study is to gather information for the American Registry of Research and Research-Related Organizations in Education. This Registry will be a comprehensive computer file listing organizatiors that have performed education RDD&E-related work in the past, and that have a current interest and capability in this area. The file will also be used to generate a published Directory which should be ready early in 1979. Listings of organizations that have not performed education RDD&E during their past completed fiscal year, but have current capability, will include their name, address, phone, and name of director or head. Should your organization be included in the Registry?

Yes 0

No (THANK RESPONDENT AND END INTERVIEW). 1

IF YES:

OBTAIN NAME OF PERSON(S) THAT SHOULD BE LISTED AS DIRECTOR OR HEAD OF THE ORGANIZATION--UP TO TWO NAMES ARE ALLOWED.

Name _____ Title _____

Name _____ Title _____

THANK RESPONDENT AND END INTERVIEW.

The following questions concern some general characteristics of (ENTITY). Before we begin, I would like to explain that the information will be used for two purposes. The first is a statistical report describing organizations that perform any activities pertinent to education RDD&E. In this report, the information will be reported in aggregate form only. The second purpose for which the information will be used is to prepare a Registry describing each organization individually. A printed Directory will also be generated from this file. As we go through the questionnaire, if we come to any item which you wish us to handle confidentially, that is, not to associate with the name of your organization, please let me know.

9. Now, in what calendar year was the [ENTITY] founded as it exists in its present form, that is, with its current legal status or major organizational mission? (DO NOT ASK: PUBLIC EDUCATION AGENCY LEVEL.)

[1] 13/0

_____ 14-17/9

10. Many of the questions in this survey will refer to the [ENTITY'S] most recent, completed fiscal year.

On what date did that year begin?

Month Day Year 18-23/9

On what date did that year end?

Month Day Year 24-29/9

INTERVIEWER FOLLOW THESE SKIP PATTERNS

PRIVATE SECTOR - CONTINUE WITH Q. 11

ACADEMIC SECTOR - GO TO Q. 14

PUBLIC SECTOR - AGENCIES - GO TO Q. 19

PUBLIC SECTOR - UNITS - GO TO Q. 18

11. During its past fiscal year was education RDD&E the sole or major activity of the [ENTITY]? [1] 30/0

Yes (GO TO Q. 19). 0

No (ASK Q. 12) 1 31/2

12. During its past fiscal year, was RDD&E the sole or major activity of the [ENTITY]? [1] 32/0

Yes (GO TO Q. 17). 0

No (ASK Q. 13) 1 33/2

13. What was the [ENTITY'S] principal activity during that year?

_____

PRIVATE SECTOR, ASK

(CODE ANSWER INTO ONE OF THE FOLLOWING CATEGORIES; VERIFY THE APPROPRIATE CODED ANSWER WITH THE RESPONDENT.) [1] 34/0

Private school. 00

State, local or tribal government planning or administration body . . 01

Social action or civic association. . 02

Professional trade association, labor union 03

Publishing, broadcasting, audio-visual production 04

Management consulting 05

Computer services 06

Library or information services . . . 07

Architecture, design, planning. . . . 08

Health care 09

Child care. 10

Manufacturing 11

Advertising, marketing or public relations services. 12

Accounting. 13

Other (PLEASE SPECIFY): _____

_____ . 14 35-36/15

GO TO Q. 17

14. During its past fiscal year was education RDD&E the sole or major activity of the [ENTITY]? [1] 37/0

Yes (GO TO Q. 19) 0

No (ASK Q. 15) 1 38/2

15. During its past fiscal year, was RDD&E the sole or major activity of the [ENTITY]? [1] 39/0

Yes (GO TO Q. 17) 0

NO (ASK Q. 16) 1 40/2

ACADEMIC SECTOR, ASK

16. What was the [ENTITY'S] principal activity during the year? Was it. . . [1] 41/0

READ TO RESPONDENT CIRCLE ONE NUMBER ONLY

Graduate or undergraduate instruction. 0

Education administration, planning or coordination 1

Other (PLEASE SPECIFY): _____

_____ . 2 42/3

CONTINUE WITH Q. 17

(ACADEMIC AND PRIVATE SECTORS ASK)

17. Considering all the RDD&E activities of the [ENTITY] during its past completed fiscal year, to which of the following concerns were they most pertinent? [1] 43/0

READ TO RESPONDENT CIRCLE AS MANY AS APPLY

Basic science	1	44/0
Business and economics	1	45/0
Communications	1	46/0
Defense	1	47/0
Education	1	48/0
Environment (including energy development, pollution control, weather and climate)	1	49/0
Health (including disease control, mental health, drug and alcoholism prevention)	1	50/0
International cooperation and development	1	51/0
Manpower development	1	52/0
Public administration, law, justice	1	53/0
Space	1	54/0
Transportation	1	55/0
Urban planning and development	1	56/0
Other (PLEASE SPECIFY): _____		57/0
_____	1	

GO TO Q. 19

PUBLIC EDUCATION SECTOR--UNIT, ASK

18. What was the [ENTITY'S] principal activity during that year? Was it. . . [1] 58/0

READ TO RESPONDENT CIRCLE ONE NUMBER ONLY

Research, development, dissemination, or evaluation and policy studies (RDD&E) 0

Teaching, training and technical assistance. . . . 1

Administration or management. 2

Other (PLEASE SPECIFY):

_____

_____ . 3 59/4

CONTINUE WITH Q. 19

(ALL SECTORS ASK)

19. During the past fiscal year, did the [ENTITY] play a role in any education RDD&E consortia or networks? By consortia, we mean groups of otherwise independent organizations which are formally associated for purposes such as conducting particular research projects, sharing research facilities, or disseminating their research.

a. Was it a member of a consortium?

Yes . . . . . ☐

No . . . . . ☐

b. Did it administer a consortium?

Yes . . . . . ☐

No . . . . . ☐

CODE		
	1	60/0
Was a member	0	
Was an administrator . .	1	
Both member and administrator.	2	
Neither.	3	61/4

20. During the past fiscal year, about how much did the [ENTITY] spend on education RDD&E? Include in this amount chargeable overhead, indirect costs, and money the [ENTITY] spent on contracts and subcontracts for education RDD&E.

[1] 62/0

$ _____ 63-70/9

21. Think of your professional employees who work primarily in education RDD&E. How many of them were employed as regular <u>full-time</u> staff members as of the last day of your past completed fiscal year?

[1] 12/0

Full-time professionals: _____ 13-16/9

22. Again, think of your professional employees who work primarily in education RDD&E. How many of them were employed as regular <u>part-time</u> staff members as of the last day of your past completed fiscal year?

Part-time professionals: _____ 17-20/9

23. How many of your full-time professionals who work primarily in education RDD&E hold doctoral degrees? [1] 21/0

	Full-time	Part-time	
Number of professional staff with doctorates. . .	_____	_____	22-29/9

Now, can you tell me how many of the part-time professional staff who work primarily in education RDD&E hold doctoral degrees?

24. How many of your support staff who work primarily in education RDD&E were employed as regular, full-time staff members? [1] 30/0

Full-time support staff: _____ 31-34/9

25. How many of your support staff who work primarily in education RDD&E were employed as regular part-time staff members?

Part-time support staff: _____ 35-38/9

26. About how many education RDD&E projects did the [ENTITY] work on during its past fiscal year? By "project" we mean an activity which has an assigned staff, is directed toward a specific RDD&E problem or topic, and is conducted within a specific time limit. Count only projects directed by someone who works in the [ENTITY]. [1] 39/0

Projects: _____ 40-43/9

THANK RESPONDENT AND END INTERVIEW.

APPENDIX B

PARTICIPANTS IN THE ARROE PROJECT

I. NIE STAFF

Rolf Lehming, Project Officer
Ward Mason, Chief, R&D System Support Division

II. BSSR PROJECT STAFF

Laure M. Sharp, Co-Principal Investigator
Albert D. Biderman, Co-Principal Investigator
Joanne Frankel, Project Manager
Elizabeth Stevens, Research Assistant
Gloria Hamilton, Director of Research Services
Miriam Balutis, Director of Field Operations
Richard Jones, Director of Data Processing Services
Tony Cantrick, Programmer and Graphics Production
Celia Pavis, Data Reduction Manager
Deborah Besmen and Prem Khurana, Manuscript Production

III. ADVISORY COMMITTEE MEMBERS

1. PUBLIC EDUCATION COMMITTEE

Milton Bins, The Council of the Great City Schools
Ann Covill, Council of Chief State School Officers
David Darland, National Education Association
James R. Kirkpatrick, American Association of School Administrators
Bernard H. McKenna, National Education Association
James Mecklenburger, National School Boards Association
Marilyn Rauth, American Federation of Teachers

2. EDUCATION RESEARCHERS COMMITTEE

Oliver H. Bown, R&D Center for Teacher Education
Ronald G. Corwin, American Sociological Association
John D. Herzog, Council on Anthropology and Education
Harriet Lundgaard, Educational Media Council
Christine McGuire, American Psychiatric Association
Richard E. Schutz, American Educational Research Association
Joanna P. Williams, American Psychological Association

3. EDUCATION R&D SYSTEMS COMMITTEE

Clark C. Abt, Council for Applied Social Research
Jack Hughes, American Council on Education
John Logsdon, American Association for the Advancement of Science
Harold Orlans, Society for Social Studies of Science
Ellis Page, American Educational Research Association
William Russell, American Educational Research Association
Joseph Scandura, American Psychological Association
William A. Wallace, Operations Research Society of America;
The Institute of Management Sciences.

IV. MEMBERS OF THE CEIS TASK FORCE

John F. Allan, Missouri State Department of Education
Stephen W. Daeschner, St. Louis Public Schools
Donald Anderson, Buffalo School District.

APPENDIX C

PRINCIPAL ACTIVITIES OF ORGANIZATIONS NOT SPECIALIZING IN RDD&E: PRIVATE AND ACADEMIC SECTORS

APPENDIX C

PRINCIPAL ACTIVITIES OF ORGANIZATIONS NOT SPECIALIZING IN RDD&E, PRIVATE AND ACADEMIC SECTORS

Principal Activity	Private Sector (N)	Private Sector %	Academic Sector (N)	Academic Sector %
Instruction	(0)	0	(689)	83
Administration	(0)	0	(41)	5
Health Care	(50)	21	(0)	0
Association, Labor Union	(35)	14	(0)	0
Private School	(24)	10	(0)	0
Government Body	(23)	10	(0)	0
Social Services	(17)	7	(0)	0
Child Care	(16)	7	(0)	0
Publishing, Boradcasting	(9)	4	(0)	0
Management Consulting	(9)	4	(0)	0
Information Services	(3)	1	(0)	0
Advertising, Marketing or Public Relations Services	(3)	1	(0)	0
Manufacturing	(1)	0	(0)	0
Other	(46)	20	(97)	12
Number of Organizations Responding	(236)	100	(827)	100

Number of Missing Cases = 74

APPENDIX D

SUPPLEMENTARY DEFINITIONS USED DURING PHONE CONTACTS

GENERAL CHARACTERISTICS

1. "year founded in present form" means year founded with its current legal status or major organizational mission(s).

2. "major or principal activity of the organization" means that activity to which the greatest number of professional staff hours or expenditures were devoted.

3. "social concerns to which RDD&E is directed":

   "Defense" includes activities related to atomic energy.

   "Health" includes financing of medical services.

   "International Cooperation and Development" includes the conduct of foreign affairs, economic and financial assistance, and foreign information and exchange activities.

   "Manpower Development" includes manpower training and employment services, other manpower aids.

FUNDING

1. "expenditures" refers to charges, whether paid or unpaid, incurred during the organization's past completed fiscal year. Therefore, questions asking for amounts expended in various categories refer to "charges incurred" in those categories during the organization's past completed fiscal year.

2. "levels of education":

   "Pre-primary": years preceding the primary level. Includes kindergarten.

   "Elementary": the level of instruction provided in elementary schools (grades 1 through 6, 7, or 8). The terminal elementary grade (6, 7, 8) is usually determined by State law or regulation.

   "Secondary": the level of instruction provided for students in secondary schools (i.e., in the grades beginning with the grade following elementary school and ending with or below grade 12, including the junior high school and other types of high school).

"Post-secondary": the level of instruction provided for students who have graduated from a secondary school. Includes college and other programs designed to meet the needs of youth and adults pursuing a specified educational objective as a continuation of their formal education.

"Adult/continuing education": the level of instruction designed to meet the needs of adults and youth--beyond the age of compulsory school attendance--who have either completed or interrupted their formal education. May be provided through formal classes, correspondence study, radio, TV, lecture, concerts, demonstrations, and counseling by a school system, college, or other agency such as a technical school or area vocational school.

3. "sources of expenditures":

"Federal": revenue provided by the Federal government. Expenditures made from this revenue should be identifiable as Federally supported expenditures. Includes both general (non-targeted) and categorical (targeted) support.

"State": revenue provided by the State government. Expenditures from this revenue should be identifiable as state supported. NOTE: Revenues that a State education agency generates through its taxing powers should be allocated to the "State" category, not to "own funds."

"Local": revenue provided by the local government, e.g., counties, muncipalities, and their agencies. Expenditures made from this revenue should be identifiable as locally supported. NOTE: revenues that a local education agency generates through its taxing powers should be allocated to the "local" category, not to "own funds."

"Own funds":

a. Public Sector--revenue generated by the agency through sales, rentals, interest from investments, admissions, fees, and similar activities. Includes also private gifts and endowments that do not come from associations or foundations.

b. Academic Sector--revenue generated by tuition and fees assessed against students for educational and general purposes. Includes also private gifts and endowments that do not come from associations or foundations.

c. Private Sector--RDD&E sponsored by the organization (i.e., paid for out of its overhead, profits, unrelated income, or non-association/foundation endowments).

NOTE: Flow through funds--funds in which agency "2" acts as an intermediary for distributing funds from agency "1" to agency "3"--are not to be included as coming from agency "2." For example, if a State agency distributes funds, which can be identified as coming from the Federal government, to an LEA, the source of these funds is the Federal government, not the SEA.

PERSONNEL

1. Personnel "primary involved in education RDD&E" means: a. persons in private and public sectors who spend at least 50% of their working hours in education RDD&/or E activities; b. In the academic sector, persons who spend at least 50% of their research time in education RDD&/or E activities.

2. "Primary work activity" of a staff member refers to that activity in which he or she spends the greatest percentage of his/her working hours.

APPENDIX E

LIST OF ORGANIZATIONS REPORTING EDUCATION RDD&E EXPENDITURES
OF $1,000,000 OR MORE DURING THEIR LAST FISCAL YEAR

ALABAMA

Academic

Tuskegee Institute
Human Resources Development Center

University of Alabama
Office of Planning and Research
College of Community Health Science

CALIFORNIA

Public

Los Angeles City Unified School District

Academic

San Jose State University
School of Science

Stanford University
Institute of Mathematical Studies in Social Sciences

Stanford University
School of Education

University of California at Berkeley
International Center for Integrated and Biological Control

University of Southern California
School of Education

Other

Commission for Teacher Preparation and Licensing

Far West Laboratory for Educational Research and Development

Southwest Regional Lab for Education Research and Development
SWRL Education

System Development Corporation

COLORADO

Other

Education Commission of The States

McDonnell Douglas Corporation
Advanced Instructional System

NOTE: This list does not include organizations requesting that their expenditures be kept confidential.

DELAWARE

Academic

University of Delaware
College of Education

DISTRICT OF COLUMBIA

Other

American Association of Dental Schools

American Institutes for Research

Association of American Medical Colleges

Children's Hospital of Washington, D.C.
Research Foundation of Children's Hospital

Institute for Services to Education

Kirschner Associates, Inc.

National Association of College and University Business Officers

National Manpower Institute

Roy Littlejohn and Associates

University Associates, Inc.

University Research Corporation

FLORIDA

Public

Leon County Schools

Academic

Florida State University
Instructional Systems Development Center

University of Florida
College of Education

GEORGIA

Public

Pioneer Cooperative Education Service Agency

Academic

University of Georgia
Graduate Studies Research Center

University of Georgia
School of Law

ILLINOIS

Public

Illinois Office of Education
Research and Development (Vocational Education)

Academic

Governor State University
Instructional Communication Center

Northern Illinois University
Office of Research, The Graduate School

Northeastern University
Center of Inner City Studies

Southern Illinois University at Carbondale
College of Liberal Arts

University of Illinois at Champaign
Institute of Child Behavior and Development

University of Illinois, Chicago Circle Campus
Jane Addams School of Social Work

University of Illinois at Urbana
Computer-Based Education Research Laboratory

University of Illinois at Urbana
College of Education

Other

Center for New Schools

Newberry Library
Research and Development

INDIANA

Public

Indiana Dept. of Public Instruction - ESEA Title IV
Div. of Innovative Education, ESEA Title IV-C

Academic

Indiana University
Developmental Training Center

Indiana University
School of Education

Purdue University
Department of Education

KANSAS

Public

Kansas State Department of Education
Agency Operations

Academic

Kansas State University of Agriculture
and Applied Sciences
College of Education

University of Kansas at Lawrence
Department of Special Education

KENTUCKY

Academic

Western Kentucky University
College of Education

MARYLAND

Public

Maryland State Department of Education
Division of Special Education

Other

Applied Management Sciences

MASSACHUSETTS

Academic

Harvard University
Office of Academic Affairs

Harvard University
School of Public Health

University of Massachusetts
School of Education

Other

Education Development Center, Inc.

MICHIGAN

Academic

Michigan State University
College of Education

Michigan State University
College of Social Science

Michigan State University
Institute for Research on Teaching

University of Michigan
Institute for Social Research
Center for Political Studies

Wayne State University
College of Liberal Arts

MINNESOTA

Academic

University of Minnesota at Minneapolis
College of Education

University of Minnesota at Minneapolis
School of Medicine
Department of Psychiatry

Other

Minnesota Educational Computing Consortium

Mt. Sinai Hospital

MISSOURI

Public

Missouri State Dept. of Elementary
and Secondary Education
Innovative Programs

Other

St. Louis Children's Hospital

NEW JERSEY

Public

New Jersey State Dept. of Education
Division of Research, Planning and Evaluation

Academic

College of Medicine and Dentistry of New Jersey

Rutgers University, The State University of New Jersey
Graduate School of Education
Bureau of R & D

Other

Education Testing Service

E.D.U.C.O.M. Inc.

Mathematica

NEW YORK

Public

Regional Planning Center

Academic

City University of New York
Bernard Baruch College
School of Liberal Arts

City University of New York
Graduate School and University Center
Center for Advanced Study in Education

Columbia University
College of Physicians and Surgeons

Columbia University
Horace Mann-Lincoln Institute Teachers College

New York University
School of Education

State University College at Buffalo
Faculty of Applied and Professional Studies

State University of New York at Buffalo
Faculty of Educational Studies

Other

College Entrance Examination Board

Montefiore Hospital and Medical Center
Department of Patient,
Community and Public Interest

Roswell Park Memorial Institute

Syracuse Research Corporation

NORTH CAROLINA

Public

North Carolina Department of Public Instuction

Academic

University of North Carolina at Chapel Hill
College of Arts and Sciences

University of North Carolina at Chapel Hill
Frank Porter Graham Child Development Center

Western Carolina University
Office of Research and Graduate Studies

Other

NTS Research Corporation
Southeastern Office

Research Triangle Institute

OHIO

Academic

University of Cincinnati
Children's Hospital Medical Center

Other

Educational Research Council of America

Institute for Development of Educational Activities, Inc. (IDEA)

OREGON

Public

Oregon Department of Education
Instructional Services Division

Academic

University of Oregon
Center for Education Policy and Management

Other

Northwest Regional Education Laboratory

PENNSYLVANIA

Public

School District of Philadelphia
Office of Research and Evaluation

Academic

Pennsylvania State University
College of Human Development

Other

Research for Better Schools, Inc.

SOUTH CAROLINA

Public

South Carolina Department of Education
Office of General Education

Academic

Clemson University
College of Engineering

TENNESSEE

Academic

George Peabody College for Teachers
Institute for Teaching and Learning

Memphis State University
College of Education

Memphis State University
Department of Special Education
and Rehabilitation

University of Tennessee
College of Education

TEXAS

Academic

Texas A&M University
College of Education

Texas Tech. University
Dept. of Home and Family Life

Texas Tech. University
Research and Training Center
in Mental Retardation

University of Houston
College of Education

University of Texas
KLRN TV

University of Texas
Research and Development Center
for Teacher Education

Other

Southwest Educational Development Laboratory

UTAH

Academic

University of Utah
College of Engineering

Other

Utah Department of State Services

VIRGINIA

Academic

University of Virginia
School of Education

Other

HUMRRO

Mitre Corporation, Metrek Division

WASHINGTON

Academic

Central Washington State College
Graduate School and Research

University of Washington
Child Development and Mental
Retardation Center

WEST VIRGINIA

Other

Appalachia Educational Laboratory

WISCONSIN

Academic

University of Wisconsin at Madison
College of Engineering

University of Wisconsin at Madison
School of Education

University of Wisconsin at Madison
Research and Development Center
for Individualized Schooling

University of Wisconsin-Madison
Wisconsin Vocational Studies Center

APPENDIX F

DISTRIBUTION OF ORGANIZATIONS, BY STATE

State	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Alabama	(3)	1	(7)	5	(3)	1	(37)	3	(50)	2
Alaska	(0)	0	(1)	1	(1)	0	(3)	0	(5)	0
American Samoa	(0)	0	(1)	1	(0)	0	(0)	0	(1)	0
Arizona	(8)	2	(1)	1	(9)	2	(8)	1	(26)	1
Arkansas	(1)	0	(1)	1	(3)	1	(3)	0	(8)	0
California	(88)	16	(6)	4	(50)	10	(93)	7	(237)	10
Colorado	(11)	2	(2)	1	(18)	4	(25)	2	(56)	2
Connecticut	(11)	2	(0)	0	(6)	1	(8)	1	(25)	1
Delaware	(0)	0	(1)	1	(1)	0	(6)	0	(8)	0
District of Columbia	(0)	0	(1)	1	(64)	13	(30)	2	(95)	4
Florida	(10)	2	(10)	7	(8)	2	(51)	4	(79)	3
Georgia	(18)	3	(4)	3	(4)	1	(29)	2	(55)	2
Hawaii	(0)	0	(0)	0	(0)	0	(1)	0	(1)	0
Idaho	(0)	0	(0)	0	(1)	0	(6)	0	(7)	0
Illinois	(18)	3	(3)	2	(25)	5	(62)	5	(108)	4
Indiana	(8)	2	(8)	5	(7)	2	(35)	3	(58)	2
Iowa	(11)	2	(1)	1	(3)	1	(27)	2	(42)	2
Kansas	(1)	0	(2)	1	(4)	1	(22)	2	(29)	1
Kentucky	(2)	0	(1)	1	(3)	1	(21)	2	(27)	1
Louisiana	(9)	2	(5)	3	(0)	0	(12)	1	(26)	1
Maine	(1)	0	(1)	1	(0)	0	(6)	0	(8)	0
Maryland	(2)	0	(11)	7	(14)	3	(20)	2	(47)	2
Massachusetts	(6)	1	(1)	1	(32)	7	(49)	4	(88)	4
Michigan	(34)	6	(0)	0	(7)	2	(55)	4	(96)	4
Minnesota	(9)	2	(1)	1	(8)	2	(33)	3	(51)	2
Mississipi	(2)	0	(1)	1	(3)	1	(9)	1	(15)	0
Missouri	(7)	1	(6)	4	(7)	2	(27)	2	(47)	2
Montana	(1)	0	(1)	1	(1)	0	(9)	1	(12)	0
Nebraska	(8)	2	(0)	0	(0)	0	(15)	1	(23)	1
Nevada	(1)	0	(1)	1	(1)	0	(2)	0	(5)	0
New Hampshire	(0)	0	(1)	1	(1)	0	(5)	0	(7)	0
New Jersey	(16)	3	(3)	2	(11)	2	(11)	1	(41)	2
New Mexico	(0)	0	(1)	1	(7)	2	(5)	0	(13)	0
New York	(53)	10	(5)	3	(78)	16	(130)	10	(266)	11
North Carolina	(7)	1	(2)	1	(6)	1	(33)	3	(48)	2
North Dakota	(0)	0	(1)	1	(2)	0	(3)	0	(6)	0
Ohio	(39)	7	(9)	6	(11)	2	(80)	6	(139)	6
Oklahoma	(3)	1	(3)	2	(4)	1	(19)	2	(29)	1
Oregon	(17)	3	(5)	3	(5)	1	(15)	1	(42)	2
Pennsylvania	(33)	6	(3)	2	(15)	3	(50)	4	(101)	4
Rhode Island	(3)	1	(4)	3	(1)	0	(3)	0	(11)	0
South Carolina	(6)	1	(8)	5	(3)	1	(11)	1	(28)	1
South Dakota	(0)	0	(1)	1	(4)	1	(5)	0	(10)	0
Tennessee	(5)	1	(3)	2	(5)	1	(23)	2	(36)	2
Texas	(35)	6	(9)	6	(7)	2	(54)	4	(105)	4
Utah	(4)	1	(2)	1	(2)	0	(27)	2	(35)	1
Vermont	(0)	0	(1)	1	(4)	1	(0)	0	(5)	0
Virginia	(13)	2	(1)	1	(12)	2	(20)	2	(46)	2
Washington	(15)	3	(3)	2	(6)	1	(24)	2	(48)	2
West Virginia	(5)	1	(1)	1	(1)	0	(11)	1	(18)	1
Wisconsin	(12)	2	(5)	3	(7)	2	(35)	3	(59)	2
Wyoming	(1)	0	(1)	1	(3)	1	(0)	0	(5)	0

Number of Missing Observations = 1

APPENDIX G

SELECTED STAFF CHARACTERISTICS

TABLE G-1

PERCENTAGE OF PART-TIME PROFESSIONAL STAFF PRIMARILY INVOLVED IN VARIOUS EDUCATION RDD&E FUNCTIONS, BY SECTOR

Function	Sector							
	Public - Small		Public - Large		Private		Academic	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Planning & Administration.	23	0	4	1	12	0	19	0
Research	21	0	19	2	38	25	37	25
Development.	19	0	15	2	17	0	20	0
Dissemination.	22	0	11	1	12	0	19	0
Evaluation	23	1	45	37	16	0	13	0
Other.	4	0	6	3	4	0	9	0
Number of Organizations Responding	(68-71)		(31-32)		(93- 94)		(336-344)	
Number of Missing Cases	(114-117)		(78-79)		(100-101)		(238-246)	
Total (N)[a]	(185)		(110)		(194)		(582)	

[a]Mail questionnaire respondents only.

TABLE G-2

PERCENTAGE OF PROFESSIONAL STAFF WITH DOCTORATES, BY SECTOR

	Sector							
	Public - Small		Public - Large		Private		Academic	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Full-Time Staff with Doctorates. . .	40	33	41	33	33	25	72	88
Part-Time Staff with Doctorates. . .	23	0	20	1	34	17	47	42
Number of Organizations Responding	(187-368)		(44-121)		(241-350)		(679-841)	
Number of Missing Cases	(169-350)		(30-107)		(128-237)		(427-589)	
Total (N)	(537)		(151)		(478)		(1268)	

TABLE G-3

PERCENTAGE OF PROFESSIONAL STAFF WITH DOCTORATES AMONG EDUCATION RDD&E SPECIALISTS, OTHER RDD&E SPECIALISTS AND ALL OTHERS, PRIVATE AND ACADEMIC SECTORS

	Private Sector						Academic Sector					
	Education RDD&E Specialists		Other RDD&E Specialists		All Others		Education RDD&E Specialists		Other RDD&E Specialists		All Others	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Full-Time Staff with Doctorates. . .	32	25	52	43	29	20	61	67	68	80	77	100
Part-Time Staff with Doctorates. . .	34	7	43	36	33	20	39	25	44	41	51	50
Number of Organizations Responding	(95-127)		(29-39)		(113-173)		(205-258)		(54-59)		(413-515)	
Number of Missing Cases	(28-60)		(17-27)		(77-137)		(45-98)		(39-44)		(337-439)	
Total (N)	(155)		(56)		(250)		(303)		(98)		(852)	

TABLE G-4

PERCENTAGE OF PROFESSIONAL STAFF WITH DOCTORATES AMONG $1 MILLION-PLUS ORGANIZATIONS

	Sector							
	Public - Small		Public - Large		Private		Academic	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Full-Time Staff with Doctorates. . .	30	27	29	29	37	33	67	77
Part-Time Staff with Doctorates. . .	0	0	40	33	38	29	44	33
Number of Organizations Responding	(2-6)		(5-16)		(39-55)		(64-76)	
Number of Missing Cases	(0-4)		(0-11)		(3-19)		(16-28)	
Total (N)	(6)		(16)		(58)		(92)	

TABLE G-5

PERCENTAGE OF FULL-TIME STAFF IDENTIFIED WITH VARIOUS AREAS OF EXPERTISE, BY SECTOR

Areas	Sector							
	Public - Small		Public - Large		Private		Academic	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Education	68	100	61	67	46	43	52	50
Psychology	9	0	9	0	14	0	16	0
Social Sciences	2	0	3	0	13	0	10	0
Humanities	1	0	2	0	3	0	3	0
Sciences	1	0	2	0	3	0	4	0
Mathematics	6	0	10	0	2	0	4	0
Business, Economics, Accounting	3	0	4	0	6	0	3	0
Communications	3	0	3	0	4	0	3	0
Operations Research	2	0	6	0	4	0	2	0
Other	4	0	5	0	6	0	7	0
Number of Organizations Responding	(136-138)		(82-84)		(139-142)		(388-392)	
Number of Missing Cases	(47- 49)		(26-28)		(52- 55)		(190-194)	
Total (N)[a]	(185)		(110)		(194)		(582)	

[a]Mail questionnaire respondents only.

TABLE G-6

PERCENTAGE OF PART-TIME STAFF IDENTIFIED WITH VARIOUS AREAS OF EXPERTISE, BY SECTOR

Areas	Sector							
	Public - Small		Public - Large		Private		Academic	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Education	71	99	50	51	42	36	48	50
Psychology	12	0	6	0	14	0	18	0
Social Sciences	1	0	4	1	12	0	11	0
Humanities	3	0	3	2	5	0	3	0
Sciences	1	0	0	0	4	0	4	0
Mathematics	2	0	14	1	4	0	4	0
Business, Economics, Accounting	0	0	0	0	6	0	3	0
Communications	3	0	8	3	4	0	3	0
Operations Research	2	0	8	1	3	0	3	0
Other	2	0	8	3	6	0	8	0
Number of Organizations Responding	(72-73)		(30-31)		(99-101)		(349-351)	
Number of Missing Cases	(112-113)		(79-80)		(93-95)		(231-233)	
Total (N)[a]	(185)		(110)		(194)		(582)	

[a]Mail questionnaire respondents only.

TABLE G-7

PERCENTAGE OF FULL-TIME STAFF IDENTIFIED WITH VARIOUS AREAS OF EXPERTISE AMONG EDUCATION RDD&E SPECIALISTS, OTHER RDD&E SPECIALISTS AND ALL OTHERS, PRIVATE AND ACADEMIC SECTORS

Areas	Private Sector						Academic Sector					
	Education RDD&E Specialists		Other RDD&E Specialists		All Others		Education RDD&E Specialists		Other RDD&E Specialists		All Others	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Education	50	45	24	19	50	50	53	50	20	1	54	50
Psychology	15	0	30	12	9	0	13	0	18	1	18	0
Social Sciences	8	0	30	13	12	0	9	0	25	1	9	0
Humanities	2	0	2	0	4	0	2	0	9	1	2	0
Sciences	2	0	2	0	4	0	3	0	1	0	4	0
Mathematics	2	0	3	1	1	0	6	0	2	0	3	0
Business, Economics, Accounting	9	0	2	0	4	0	2	0	4	0	3	0
Communications	4	0	1	0	4	0	3	0	2	1	3	0
Operations Research	3	0	4	1	4	0	2	0	1	0	2	0
Other	5	0	2	1	7	0	5	0	10	1	8	0
Number of Organizations Responding	(56-57)		(16-17)		(63-66)		(126-128)		(23-24)		(233-236)	
Number of Missing Cases	(11-12)		(9-10)		(28-31)		(25-27)		(14-15)		(146-149)	
Total (N)[a]	(68)		(26)		(94)		(153)		(38)		(382)	

[a]Mail questionnaire respondents only.

TABLE G-8

PERCENTAGE OF FULL-TIME STAFF IDENTIFIED WITH VARIOUS AREAS OF EXPERTISE AMONG $1 MILLION-PLUS ORGANIZATIONS, BY SECTOR

Areas	Sector					
	Public - Large		Private		Academic	
	Mean	Median	Mean	Median	Mean	Median
Education	79	80	46	43	57	63
Psychology	2	0	14	9	10	0
Social Sciences	1	0	10	7	7	0
Humanities	0	0	5	0	2	0
Sciences	0	0	1	0	4	0
Mathematics	5	0	5	4	3	0
Business, Economics, Accounting	2	0	2	0	3	0
Communications	6	0	6	2	3	0
Operations Research	3	0	3	0	3	0
Other	2	1	5	0	8	0
Number of Organizations Responding	(14)		(29-30)		(37-39)	
Number of Missing Cases	(0)		(3- 4)		(7- 9)	
Total (N)[a]	(14)		(33)		(46)	

[a]Mail questionnaire respondents only. Does not include organizations in small public education sector, since N was only 3.

APPENDIX H

DISTRIBUTION OF ORGANIZATIONS BY PRIMARY TOPICS OF EDUCATION RDD&E WORK

Topic	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
ADMINISTRATION, PLANNING, AND POLICY	(77)	42	(37)	43	(56)	31	(150)	27	(320)	32
Economics of education, school finance	(32)	18	(32)	37	(34)	18	(91)	16	(189)	19
Education administration and organization	(62)	34	(37)	43	(62)	34	(159)	28	(320)	32
Enrollment analysis and forecasting	(79)	43	(38)	44	(38)	21	(104)	18	(259)	25
Personnel recruitment and utilization	(18)	10	(9)	10	(20)	11	(64)	11	(111)	11
Project and program evaluation	(126)	69	(63)	73	(96)	53	(253)	45	(538)	53
Teacher education	(44)	24	(18)	21	(58)	32	(211)	37	(331)	32
Teacher performance	(42)	23	(15)	17	(34)	19	(192)	34	(283)	28
Other administration, etc.	(12)	6	(8)	9	(13)	7	(24)	4	(57)	6
FACILITIES	(8)	4	(4)	5	(8)	4	(32)	6	(52)	5
Architecture design	(8)	4	(2)	2	(6)	3	(15)	3	(31)	3
Audio-visual equipment and facilities	(13)	7	(7)	8	(11)	6	(64)	11	(95)	9
Computers and computer use	(54)	30	(22)	26	(25)	14	(117)	21	(218)	21
Other educational technology	(2)	1	(2)	2	(10)	6	(23)	4	(37)	4
CURRICULA	(21)	12	(11)	13	(23)	13	(74)	13	(129)	13
General curriculum development	(80)	44	(29)	34	(48)	26	(165)	29	(322)	32
Specific curricula	(27)	15	(13)	15	(21)	12	(73)	13	(134)	13
English and speech	(54)	30	(19)	22	(18)	10	(63)	11	(154)	15
Fine arts	(17)	9	(10)	12	(6)	3	(34)	6	(67)	6
Foreign languages	(21)	12	(11)	13	(8)	4	(38)	7	(78)	8
Health and safety	(26)	14	(11)	13	(26)	14	(61)	11	(124)	12
Mathematics	(84)	46	(37)	43	(23)	13	(77)	14	(221)	22
Natural science	(27)	15	(12)	14	(18)	10	(70)	12	(127)	12)
Physical education	(26)	14	(9)	10	(5)	3	(35)	6	(75)	7
Reading, language arts	(102)	56	(42)	49	(36)	20	(112)	20	(292)	29
Social studies and social sciences	(36)	20	(17)	20	(22)	12	(85)	15	(160)	16
Other curricula	(26)	14	(16)	19	(42)	23	(123)	22	(207)	20
Professional Education:										
Engineering and architecture	(0)	0	(0)	0	(5)	3	(18)	3	(23)	2
Law	(5)	3	(3)	3	(2)	1	(15)	3	(25)	2
Teaching	(28)	15	(10)	12	(44)	24	(44)	8	(170)	17
Other professional education	(2)	1	(3)	3	(24)	13	(83)	15	(112)	11
Vocational, career, and cooperative education	(53)	29	(26)	30	(58)	32	(138)	24	(275)	27

Topic	Sector								TOTAL	
	Public - Small		Public - Large		Private		Academic			
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
INSTRUCTION.	(20)	11	(12)	14	(19)	10	(67)	12	(118)	12
Audio-visual methods	(17)	9	(8)	9	(27)	15	(110)	19	(162)	16
Computer-assisted instruction.	(27)	15	(15)	17	(25)	14	(94)	17	(161)	16
Instructional systems design .	(28)	15	(18)	21	(28)	15	(120)	21	(194)	19
Instructional methods.	(45)	25	(25)	29	(46)	25	(184)	33	(300)	30
Special Needs:										
Bilingual.	(44)	24	(30)	35	(36)	20	(64)	11	(174)	17
Gifted and talented.	(85)	47	(25)	30	(19)	10	(58)	10	(187)	18
Emotionally handicapped. . .	(59)	32	(27)	31	(35)	19	(103)	18	(224)	22
Mentally handicapped	(64)	35	(24)	28	(39)	21	(126)	22	(253)	25
Physically handicapped . . .	(57)	31	(23)	27	(43)	24	(112)	20	(235)	23
Other special needs.	(9)	5	(9)	10	(25)	14	(58)	10	(101)	10
GUIDANCE AND COUNSELING.	(45)	25	(19)	22	(25)	14	(123)	22	(212)	21
PSYCHOLOGICAL ASPECTS.	(15)	8	(8)	9	(17)	9	(71)	12	(111)	11
Attitudinal and motivational studies.	(49)	27	(18)	21	(37)	20	(159)	28	(263)	26
Child and adolescent development.	(16)	9	(12)	14	(34)	19	(122)	22	(184)	18
Learning outcomes; academic performance.	(67)	37	(36)	42	(54)	30	(192)	34	(349)	34
Psychology of learning	(16)	9	(4)	5	(22)	12	(112)	20	(154)	15
Psychometric methods; tests and measurement.	(68)	37	(32)	37	(41)	23	(154)	27	(295)	29
Talent and creativity.	(35)	19	(5)	6	(9)	5	(54)	10	(103)	10
Other psychological aspects.	(1)	0	(3)	3	(10)	6	(34)	6	(48)	5
SOCIAL ASPECTS	(12)	6	(10)	12	(21)	12	(61)	11	(104)	10
Demographic analyses	(61)	34	(31)	36	(47)	26	(127)	22	(266)	26
Delinquency, security.	(17)	9	(16)	19	(12)	7	(38)	7	(83)	8
Classroom climate, discipline.	(55)	30	(24)	28	(26)	14	(104)	18	(209)	20
Institutional, comparative and historical studies . . .	(16)	9	(11)	13	(27)	15	(76)	13	(130)	13
Occupational outcomes.	(25)	14	(13)	15	(31)	17	(89)	16	(158)	16
Race and minority relations. .	(30)	16	(21)	24	(45)	25	(99)	17	(195)	19
School-community relations . .	(47)	26	(25)	29	(52)	29	(86)	15	(210)	21
Other social aspects	(2)	1	(5)	6	(10)	6	(40)	7	(57)	6
OTHER APPLICATIONS	(6)	3	(12)	14	(16)	9	(45)	8	(79)	8
Number of Organizations Responding	(182)		(86)		(181)		(565)		(1016)	
Number of Missing Cases	(3)		(24)		(13)		(17)		(55)	
Total (N)	(185)		(110)		(194)		(582)		(1071)	